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For Healthier Lives

Massachusetts Department of Public Health

Communicable Disease *Update*

Newsletter of the Bureau of Communicable Disease Control

Volume 2 Issue 2 April 1994

30% of vaccine lost to poor accounting

Low rate could jeopardize universal immunization

The Department of Public Health is committed to universal vaccine distribution. In 1993, it distributed more than 2.6 million doses to providers at a cost of $15 million.

Providers currently account for only 70% of the vaccine they receive -- **$5 million dollars worth of vaccine is unaccounted for.** Continued and expanded federal support of universal distribution requires that providers account for all doses of vaccine on their "Vaccine Usage Report."

Please take care to accurately fill out your vaccine usage forms and make sure that your inventory, plus the number of doses administered, plus doses lost or expired equals the number of doses received. The Massachusetts Immunization Program plans to monitor accountability closely over the next few months.

If accountability does not improve, the MIP will pull vaccine distribution back to the six regional offices. Vaccine will *not* be available at the local board of health or other local depot.

DPH is evaluating ways to simplify the reporting process. However, if provider accountability does not improve it could seriously jeopardize our previously successful universal vaccine distribution program.

Vaccines for Children program to start in October

In order to remove financial barriers to immunizations faced by about half the children in the United States, the federal government will implement the Vaccines for Children (VFC) program beginning in October.

This program will provide vaccines for children who are up to 18 years old and who meet one of the following criteria: Medicaid enrolled, uninsured, or who are Native American. It will also provide vaccines for children who are insured, but whose insurance does not cover immunizations, if they are immunized at federally qualified health centers.

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Rubella outbreak leads to at least 50 cases

On Jan. 6 the Immunization Program received confirmation of a case of rubella in a 39-year-old man who works as an officer at a Middlesex County jail. Since then, there have been more than 50 laboratory confirmed cases of rubella associated with this outbreak.

Rash onsets range from Dec. 12 to March 7. Case ages range from 19 to 57 years, but most are in their 20s and 30s. The cases have been clustered in Suffolk and Middlesex counties, with single cases reported from Essex, Plymouth and Norfolk counties.

Initially, cases occurred in the homeless population in Boston and Cambridge, inmates and officers of jails in Middlesex County, and a public health hospital and substance abuse treatment center in Middlesex County. Fortunately, rigorous controls were started and no new cases have been reported from these groups. The most recent cases are isolated ones in individuals from the communities of Boston, Cambridge, Randolph, Wareham and Lawrence.

Over 15,000 doses of MMR vaccine have been administered to inmates and officers of correctional facilities, homeless shelter staff and clients, hospital staff and patients, and known contacts of cases in the community. Rubella alerts have been mailed statewide to health care providers, substance abuse centers, public health hospitals, correctional facilities and to social service and health care services for the homeless. Please be on the alert for rash illness and report it to your regional epidemiologist as soon as possible.

Rubella is highly communicable and is spread through the air when an infected case sneezes, coughs or talks. Common symptoms are mild fever, headache, swelling of the lymph glands and a rash that lasts about three days. Half the cases don't get a rash. Cases are infectious seven days prior to seven days after rash onset.

The disease is mild in most people. But if susceptible pregnant women are exposed, especially in the first trimester, the fetus is at great risk for congenital anomalies. Up to 85% of babies exposed in the first trimester are born with Congenital Rubella Syndrome.

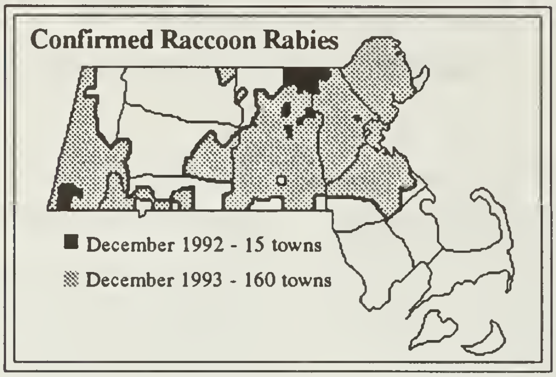
Studies show up to 20% of adults are susceptible to rubella. Wide-scale vaccination in Massachusetts started in 1969. But because it was not required for school until 1979, many young adults are susceptible. Older adults are also susceptible -- in this outbreak, one case was 57. Providers should assess the immunization status of children and adults at each visit. Toddlers should receive their first dose of measles, mumps and rubella vaccine at 15 months and a second dose at seventh grade entry.

Adults without written evidence of at least one dose of MMR or serologic proof of immunity should have serologic evaluation and, if susceptible, should be vaccinated. Women of child-bearing age are at high risk of transmitting rubella virus to their unborn infant.

Women should be evaluated and immunized at any encounter with the health care system, including family planning, well child visits, postpartum visits, premarital screening, prenatal screening and pre-employment screening. Immunization status of adults should also be evaluated at college entry.

Epidemiology Update

Rabies update: Massachusetts, 1993



Since the first case of raccoon rabies was confirmed in Ashby on September 16, 1992 we have witnessed the continued spread of raccoon rabies across the state. By last December, raccoon rabies had been identified in 175 towns in Massachusetts. Animals testing positive include raccoons (585), skunks (80), bats (22), cats (13), woodchucks (10), foxes (8), and cows (2).

During 1993, there were 24 incidents involving rabid animals biting people; but, there have been no cases of human rabies in Massachusetts. Children (under 10 years) were involved in 21% of the exposure incidents, highlighting the need to teach children the importance of avoiding contact with wild or stray animals.

The 13 positive cases of cat rabies emphasizes the importance of vaccinating pets to prevent the spread of rabies. It is mandatory by law to vaccinate cats for rabies, yet nine of the 13 rabies-positive cats were owned, unvaccinated cats that spent time outdoors. The remaining four cats were stray. All of these human exposures through cats were preventable. Education and vaccination are keys to preventing the spread of rabies in your area. Please encourage rabies education and vaccination of pets, especially cats, in your area. For more information on rabies call (617) 522-3700 ext. 420.

Shellfish-related sickness reported

In February, several people from Rhode Island and the Fall River area of Massachusetts became ill after consuming lapas. Lapas, or limpets, are shellfish traditionally eaten raw. While they are found worldwide, most lapas sold in the US are imported from Spain or Portugal.

Thirty people from Massachusetts reported symptoms, which included watery diarrhea, vomiting and abdominal cramps, 48 - 72 hours after eating the shellfish. The implicated shipment of lapas consisted of approximately 80 pounds sold in Fall River and 36 pounds in Rhode Island.

Testing of food and clinical specimens for common foodborne pathogens has been negative to date. The Centers for Disease Control and Prevention has been assisting in the investigation and will be doing further testing to ascertain the cause of this outbreak. However, less than 10% of all recent shellfish-borne outbreaks of gastroenteritis report a causative agent.

Consumers should be aware that the safety of eating raw imported shellfish cannot be guaranteed and should be done with caution.

Oral rabies vaccine trial to begin

In an attempt to control the spread of rabies onto Cape Cod, Tufts University Veterinary School, in cooperation with the Department of Public Health, is scheduled to begin a raccoon oral rabies vaccine trial around the Cape Cod Canal later this month. Watch for more information in future editions of Communicable Diseases *Update*.

New wolf-hybrid law enacted

Effective January 1, wolf hybrids and wild-feline hybrids cannot be possessed, sold, traded, breeded, imported, exported, or released in Massachusetts. Those owning hybrids prior to January 1 must obtain a permit for these animals from the Massachusetts Division of Fisheries and Wildlife on or before July 31. Violation of this law may result in a monetary fine.

Hantavirus death reported from Rhode Island

Since the June 1993 outbreak of hantavirus infection in the four-corners area of Colorado, Arizona, New Mexico, and Utah, 16 states, most west of the Mississippi River, have reported confirmed cases of hantavirus infection in humans. The most recent case in Rhode Island brought the problem closer to home. It is not known if rodents in Massachusetts are infected with hantavirus and there have been no reported cases of hantavirus infection in humans in Massachusetts to date.

The hantavirus is carried by rodents, primarily the deer mouse. Transmission of the hantavirus to humans occurs through the inhalation of dust that contains dried rodent feces which contains the virus. The best method for preventing infection with hantavirus is avoiding contact with rodents and their feces and urine. If contact is unavoidable, the following precautions should be followed:

1. When handling live or dead rodents, rodent droppings, or traps always wear gloves.
2. Disinfect sites where you have seen rodents or their feces by using a sponge or mop and a general purpose disinfectant (or 1 to 1 1/2 cups of household bleach in 1 gallon of water). **Do not sweep or vacuum.**
3. Prevent rodents from entering your home by sealing openings greater than 1/4 inch and storing food (including pet food), garbage, and water in tightly sealed containers.

For more information on hantavirus, call (617) 522-3700 ext. 420.

Lyme Disease curriculum available

A Lyme disease awareness video and curriculum for 4th through 6th graders is now available. Teachers and school nurses are encouraged to request these materials and incorporate them into their teaching plans. Please send your request in writing to: Department of Public Health, State Labs, Division of Epidemiology, 305 South Street, Boston, MA 02130 ATTN: Jocelyn Isadore. The curriculum and video may be copied as necessary and must be returned to the Division of Epidemiology within one month of receipt.

STD Update

Healthy People 2000

Progress toward the year 2000 STD objectives

Healthy People 2000 is both a federal and state program to identify health goals and objectives. In Massachusetts, the STD objectives for the year 2000 are based on 1989 STD rates.

STD trends over the past four years show significant decreases in incidence rates of Sexually Transmitted Disease (STD). These trends suggest that progress has been made in both reducing the amount of disease and in the adoption of safer sexual behaviors by some groups. However, presently higher rates of STDs in adolescents and young adults indicate that they continue to be at risk and current strategies will need to be intensified while new efforts to reach at risk adolescents are developed.

Incident rates in syphilis, gonorrhea and chlamydia are indicators of the increase or decrease in the rates of all STDs. Overall rates of syphilis decreased 43% from 28 cases per 100,000 population in 1990 to 16 cases per 100,000 population in 1993. Gonorrhea rates decreased 58% from 125 cases per 100,000 population in 1990 to 52 cases per 100,000 population in 1993. Chlamydia rates decreased 32% from 204 cases per 100,000 population in 1990 to 138 cases per 100,000 population in 1993. Progress toward Year 2000 objectives are highlighted below:

Syphilis Objective

Lesion (infectious) syphilis rates declined in 1993 to 2 cases per 100,000 population, falling 60% below the Healthy People 2000 objective of 5 cases per 100,000. (See Chart 1)

Gonorrhea Objective

Gonorrhea rates declined in 1993 to 52 cases per 100,000 population, close to the Healthy People 2000 objective of 50 cases per 100,000. (See Chart 2)

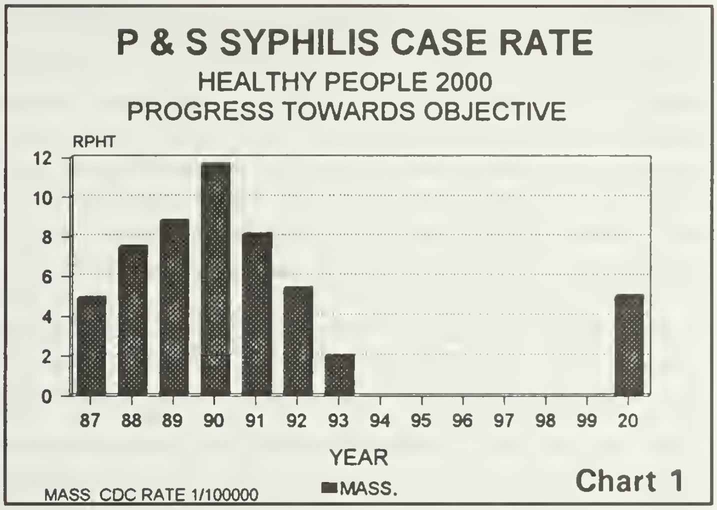
Chlamydia Objective

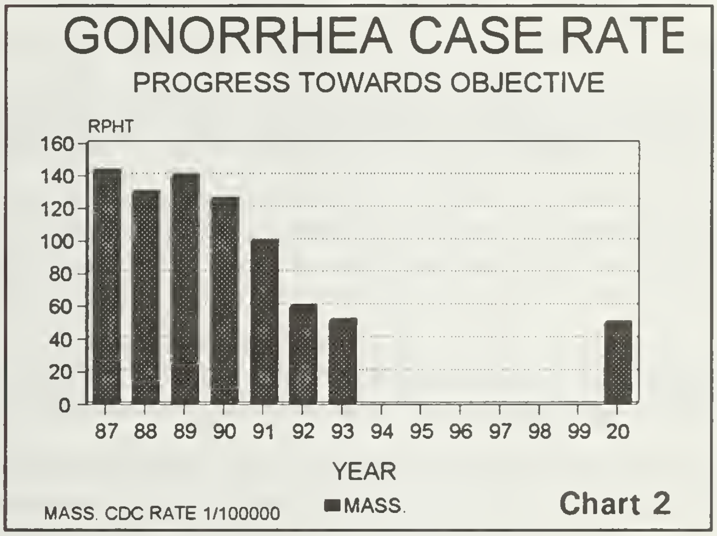
Chlamydia rates declined in 1993 to 138 cases per 100,000 population in 1993 falling below the Healthy People 2000 objective of 140 cases per 100,000. (See Chart 3)

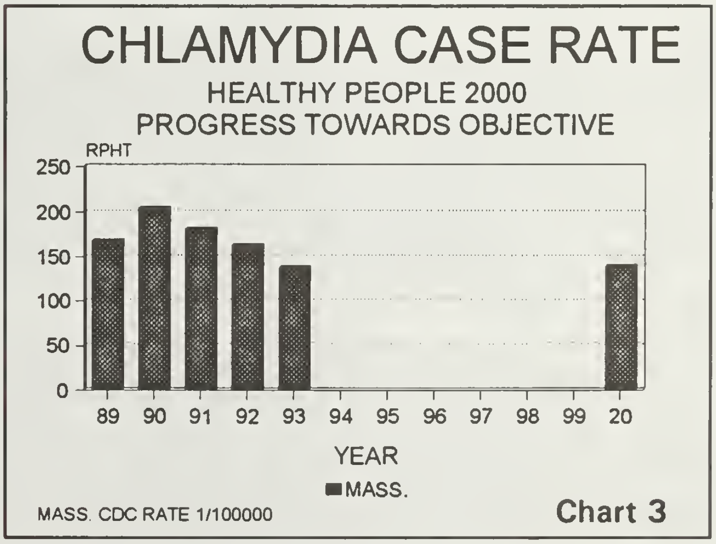
Announcements

SAVE THE DATE: November 17, 1994 STD Update Conference This year's annual conference will focus on women and adolescents.

May 12, 8:15-9:30 am Women and AIDS - Social Barriers to Safer Sex, Hortensia Amaro PhD, Women's Health Breakfast Series, Massachusetts Public Health Association. At the Tufts University School of Medicine, Department of Community Health. For registration information please call (617) 524-6696.







Regional Immunization *Updates*

Boston News: Rubella outbreak hits homeless shelters

Regional Epidemiologist: Nancy Harrington (617) 534-5609

Epidemiology: As of March 4, 13 cases of rubella have been confirmed in staff and guests of the homeless shelter population in Boston. The cases have had onsets of rash illness from late January to mid-February. The Boston Health Department is continuing to work closely with health care providers in the shelter system to help control the outbreak. Current measures include vaccinating all susceptible staff with MMR and offering the same vaccine to all eligible guests. Staff members are also conducting aggressive surveillance for rash illness. Guests found to be symptomatic for rubella are hospitalized on an isolation floor at Boston City Hospital until rubella is ruled out or confirmed and the patient is no longer infectious.

In addition to the shelter cases of rubella, an additional six cases of rubella have been confirmed in the general population in Boston since early February. None of these cases has been linked to either the shelters or prisons.

Providers should be made aware of this outbreak and consider rubella when a patient presents with a rash-like illness. Feel free to contact our office if you have any questions or want to report a possible case of rubella.

Educational activities: Planning is underway for activities in Boston revolving around National Infant Immunization Week. Cartoon characters are once again expected to visit local health care providers to call attention to the importance of vaccinating children in a timely manner. Anyone interested in further details about Boston's activities should contact Pat Tormey at 534-5611.

Metro News: Year-end morbidity reported

Regional Epidemiologist: Lisa Berger, M.P.H. Regional Nurse: Jean Franzini, R.N. (617) 522-3700 Ext. 420

Epidemiology: A total of 123 cases of vaccine-preventable diseases was reported to the Metro Region in 1993. There were 118 cases of pertussis, one case of measles, two cases of rubella, which are part of an ongoing outbreak, one case of mumps, and one case of tetanus. For the first two months of 1994, there have been seven additional cases of rubella reported in adults, and sporadic cases of pertussis throughout the region.

Vaccine issues: I want to thank you all for submitting the influenza vaccine usage reports. The Metro Region was able to account for 86% of the vaccine distributed. Of the vaccine distributed, we found that 1% went to children less than 12 years old, 13% went to those aged 12-44 years, 23% went to those aged 45-64 years, and 62% went to those over 65.

Educational activities: The Metro Region round table is April 14 from 1 to 3 pm at the State Lab. Please plan to attend.

Western News: Vaccine management tips given

Regional Epidemiologist: Marija Popstefanija, M.P.H. Regional Nurse: Judith Coates, R.N. (413) 545-6600

Vaccine issues: Please follow these guidelines for vaccine management and accountability: store vaccines at proper temperatures (chart available from our office), record temperatures of all refrigeration units daily, return vaccine at least three months before the expiration date to ensure redistribution to other providers, keep only a one month supply on hand, rotate your stock so that the earliest expiration date is utilized first, and record each dose administered accurately. A complete list of tips for vaccine management and accountability is available by calling our office. Any suggestions you may have on ways we can improve accountability would be appreciated.

Epidemiology: During the first three months of 1994, 11 cases of pertussis ranging in age from 1 month to 18 years, from Hampshire and Hampden counties were investigated. Four were culture confirmed. There were also two suspected cases of mumps, one whose culture was negative and the other whose result is pending. There was one case of H-flu pneumonia in an adult from the Berkshires. Preventive measures were implemented.

Educational activities: The Massachusetts Nurses Association will hold its spring meeting on June 1 at Holyoke Community College. The focus will be on immunizations. Hope to see you there.

Regional Immunization *Updates*

Southeast News: Rubella outbreak

Regional Epidemiologist: Edward Pomfred, R.N. **Regional Nurse: Joan Thompson Allen, R.N.** **(508) 947-1231**

Epidemiology: Massachusetts is experiencing a rubella outbreak. In mid-March, there were two cases in Norfolk County and one case in Plymouth County. Rubella alerts have been mailed to all providers, including hospitals. If you need a rubella alert, please call our office.

A case of measles was confirmed in a hospital staff worker in Bristol County. Outbreak control included immunizing more than 450 staff members who did not have evidence of immunity.

Cases of pertussis also have been reported throughout the region. Of particular concern is a school-based cluster in Bristol County involving three confirmed cases in a tenth graders and many suspect cases under investigation. Please consider pertussis in the differential diagnosis of teen-agers presenting with a cough illness.

The New Bedford Community Health Network Area is working to determine the immunization levels of kindergarten students in the nine communities making up the CHNA. More information to follow in subsequent issues of this newsletter.

Vaccine issues: Warm weather is approaching. Everyone picking up vaccine should bring an adequately sized cooler. Anyone picking up from your depot should be told to do the same to maintain the cold chain. Some vaccines are more sensitive to temperature changes than others. We ask for your full cooperation in these matters.

Educational activities: Joan Allen is available to speak to your program or group regarding the new Standards of Pediatric Immunization Practices, vaccine handling and storage, and vaccine administration. Also, private and public-based immunization assessments are available. Please call the office if you are interested.

Northeastern News: Materials available for National Infant Immunization Week

Regional Epidemiologist: Karen Ogden, R.N. **Regional Nurse: Bertha Hopper, R.N.** **(508) 851-7261**

Educational activities: National Infant Immunization Week is April 23 to 29. A suggestion for promoting this week: check with your local cable station about airing the video, "Before It's Too Late, Vaccinate" during that week. Other educational materials such as brochures, posters and videos (in English, Spanish and Portuguese) are available for your activities.

A presentation on outbreak control is planned at Melrose-Wakefield Hospital on April 28 and an immunization assessment is planned for a private practice on April 25.

Epidemiology: There have been 16 cases of rubella reported in the Northeast Region since January (see page 1). Aggressive control measures were implemented and over 4,000 adults received a dose of MMR vaccine. More than one incubaton period (three weeks) has passed and no further cases have been reported from either facility.

Eleven confirmed cases of pertussis have been reported, including four infants $\leq$12 months of age and seven adolescents between 11 and 19 years of age. Please be on the lookout for rash illness and report any suspect cases to the regional office immediately.

Vaccine issues: In 1993, only 70% of vaccine doses were accounted for; a loss of $5 million annually. In order to ensure accurate accountability, we must work together to ensure that vaccine usage and order forms are sent in accurately and on a monthly basis. Please remember to bring coolers when vaccine is picked up.

Central News: Cases of pertussis seen in region

Regional Epidemiologist: Jack Bicknell **Regional Nurse: Margaret Regele, R.N.** **(508) 792-7880**

Epidemiology: There have been 18 cases of pertussis reported to this office during the first two months of 1994. Twelve of these cases were in the 11-16-year-old age group. Seven school systems are involved and control measures, including identifying other cases and prophylaxing contacts to prevent further spread, are in place. The northeastern section of the region has seen the majority of the cases, but other areas are also experiencing pertussis.

Vaccine issues: During the next few months, we will meet with boards of health and VNAs, that act as vaccine depots, to identify problems in the vaccine usage reporting system and to see what steps may be taken to solve them.

Educational activities: Immunization assessments are in progress in the region for private providers and community health centers. Please call the regional health office if you would like to have one done in your practice. Community needs assessments are taking place in the Leominster/Fitchburg area as well as the Milford area. Health needs of children are being looked at, including immunizations. The Milford VNA is organizing a Task Force to look at immunization status. The first meeting will be held on April 20.

TB *Update*

Refugee Health active in TB control

The Refugee Health Program (RHP) works closely with the Division of TB Control to ensure that TB services are accessible to refugee populations. The core of the program are fifteen trained bilingual, bicultural staff from Vietnam, Cambodia, Laos, the former Soviet Union, Haiti and Somalia who provide outreach, health education, clinical interpreting, treatment adherence monitoring, and case finding in areas of the state most highly affected by refugee resettlement. Staff assist local TB nurses in health departments, TB clinics and home visits and in case investigations/contact screenings. Most staff are also trained and approved to plant and read PPDs.

Refugees have diverse backgrounds, but many come from areas of the world where TB is endemic. Some are survivors of war and refugee camps where conditions may have been crowded and the opportunity for TB transmission great. Further, because many refugees who have resettled in Massachusetts have health belief systems which are different from the American majority, there is a need for both the public health practitioner and the refugee patient to better understand each other and their responses to a diagnosis of TB disease or infection. For some, TB is a stigmatizing condition and great care should be taken to assist a refugee patient in overcoming stigmatization through education, sensitivity to concerns and assurances of confidentiality.

During the five year period 1989-93, Southeast Asians represented 10% of all Massachusetts TB cases and fully 98% were successfully treated. Over 75% of Southeast Asian patients on preventive therapy completed six months of treatment during the same time period. The success of the RHP is attributable to the dedication of all outreach staff to their patients and communities.

ALA\ATS conference sceduled for Boston

The 1994 ALA/ATS International Conference will be held May 21-25 at the Hynes Convention Center in Boston. You are invited to attend to learn the latest and most significant developments in lung biology and medicine as well as lung health education. For more information call 1-800-621-1083.

Congratulations!

Congratulations to the City of Cambridge TB Clinic for recently receiving an award from the Department of Public Health for excellence in service.

New ATS treatment guidelines to be published

The new ATS statement "Treatment of Tuberculosis and Tuberculosis Infection in Adults and Children" will be published in the May issue of American Review of Respiratory Disease.

TB skin testing guidelines reviewed

Skin testing for tuberculosis can be extremely helpful, but it is often fraught with problems. This brief update is not intended to be comprehensive, but to highlight recent changes and some common areas of confusion.

PPD (5 TU, intermediate strength) by the Mantoux intradermal method is the only acceptable test for TB infection, in adults and children. Multiple puncture devices (i.e., Tine, etc.) should never be used due to false negative reactions. MDPH (and the pediatric Red Book) now recommend fewer tests for children in high-risk communities, but all by the Mantoux PPD method. The **first strength test (1 TU)** can be used in rare circumstances where testing is necessary and a severe reaction is anticipated. The **second strength PPD (250 TU)** should almost never be used. It presents such a strong antigenic dose that many persons sensitized to environmental mycobacteria will react. A positive reaction from 2nd strength PPD does not mean TB infection!

MDPH supplies only **Connaught brand of PPD (Tubersol)**. Although there have been reports of false positives with both available brands of PPD, it is our impression and that of other health departments that Tubersol has had fewer quality control problems.

It is essential to **record the size of the induration (not redness) of the PPD reaction in millimeters**, not as simply "positive" or "negative". Self reading is unacceptable for that reason. Common size comparisons used by patients can be misleading. Few people realize, for example, that a dime is about 17 mm in diameter!

In 1989 the size criteria for interpreting skin tests as positive was changed to **5, 10 or 15 mm, depending on the risk of TB infection or disease**. The predictive value of the test is highly dependent on the risk (prior probability) of infection, and on the size of the reaction. The new, **5 mm cut-offs for very high-risk categories (HIV-infected, close contacts, old fibrotic "TB" lesions on x-ray)** reflect a desire to "overdiagnose" TB infection, whereas the higher threshold for low risk populations is intended to prevent overdiagnosis. By some estimates, **up to 75% of 10 to 14 mm reactions in low prevalence populations are due to environmental mycobacteria.**

Another way to prevent overdiagnosis of recent infection is to use more stringent criteria for **PPD "conversion" which is now defined as a 10 mm change from baseline within 2 years for persons under 35, and a 15 mm change for persons 35 and older.** For persons over 35 who are tested repeatedly, in institutional settings, a **2-step initial test** is recommended.

In both testing and interpretation, a **history of BCG should be ignored** since vaccinated persons are not thought to remain reactive to PPD for very many years. A large reaction in BCG-vaccinated person is most likely due to TB infection.

Anergy testing is required only when the results affect care. For example, in persons in very high risk groups for TB infection, anergic individuals might be offered preventive therapy. Some groups at risk for HIV, however, may not be at high risk of prior TB infection and would not benefit from INH if anergic.

Immunization *Update*

NBC's "NOW" takes shot at DTP vaccine

On the March 2 NBC television program NOW with Tom Brokaw and Katie Couric, one segment dealt with safety issues related to diphtheria, tetanus and pertussis (DTP) vaccine. Information presented in this show has caused concern among some parents of babies receiving DTP vaccine.

We empathize with parents whose children experience neurologic events or death following DTP vaccination. However, there are several factors to keep in mind when considering illness occurring near the time of vaccination. Neurologic illness, including developmental delay and SIDS, are more likely to occur during the first year of life -- the same time when children receive most immunizations. When these events occur after immunization, they could be occurring due to chance alone.

A recent study by the Institute of Medicine reviewed current data on the safety of pertussis vaccine. Based on information available to date, the Centers for Disease Control and Prevention concludes that: (1) there is a very low risk of vaccine-caused brain damage, (2) the current vaccine is effective, and (3) there remains a very real risk posed by pertussis disease among our youngest, most vulnerable children.

Therefore, both the CDC and the American Academy of Pediatrics continue to strongly recommend the routine immunization of infants and children with DTP vaccine.

Pertussis incidence has increased greatly over the last few years. Over 6,000 cases and eight deaths occurred nationwide in 1993, the highest number since 1967. In Massachusetts last year we had over 346 cases of pertussis reported. Infants accounted for 24% of the cases. Many of them were hospitalized.

In Massachusetts, DTP has been manufactured by the Biologic Laboratories of the Department of Public Health since 1950. Massachusetts' DTP has compared very favorably in safety trials to some of the commercially-manufactured DTP vaccines.

We urge parents to read the Vaccine Information Pamphlets about the risks of pertussis versus vaccine, and to talk to their providers about the risks and benefits of this important vaccine.

MIP to distribute E-IPV through regional offices

The Massachusetts Immunization Program will begin distributing enhanced inactivated poliovirus vaccine (E-IPV) on May 2. E-IPV will be available on a limited basis for persons who fall into one of the following high risk categories:

1. Peeple with compromised immunity who are unimmunized or partially immunized, including those with symptomatic and asymptomatic human immuno-deficiency virus (HIV) infection.
2. Household contacts of an immunodeficient individual, including those with HIV infection.

E-IPV will be distributed through the regional offices and will be closely monitored. To place an order, contact your regional epidemiologist for a vaccine agreement/order form.

Hepatitis B vaccine alert

You may have several different formulations of hepatitis B vaccine in your refrigerator. Remember to check the vial and the package insert to ensure administration of the correct dose.

Immunization Program sets goals for '96

Aims at 90% immunized for most vaccines

Vaccine	1994	1995	1996
DTP-3+	80%	85%	90%
Polio-3	75%	85%	90%
MMR-1	85%	90%	90%
Hib-3+	75%	85%	90%
HBV-3	30%	50%	70%

The Massachusetts Immunization Program has adopted the goals set by the National Immunization Program to have 90% of the country's two year olds immunized with most vaccines by 1996.

Vaccine-preventable disease reduction goals were also set for 1996, including elimination of indiginously acquired cases of measles, rubella, diphtheria, wild virus polio, tetanus (under 15 years), and Hib (under 5 years).

To reach these goals, the MIP plans to increase vaccination levels, enhance disease surveillance so that outbreaks can be halted early, and educate providers and the public about the important role vaccinations play in maintaining good health.

National Infant Immunization Week is April 23-29

The Massachusetts Immunization Program is encouraging health care providers and boards of health to join us in celebrating National Infant Immunization Week from April 23 to 29.

The week is held every year to draw attention toward the importance of fully immunizing all the nation's children by the time they are two years old. The MIP plans to promote immunizations through several activities, including:

- Distribution of immunization education materials to pharmacies and housing developments in neighborhoods considered at high risk for low immunization rates.
- Presentations to health care providers on the Standards for Pediatric Immunization Practices.
- Distribution of press releases and public service announcements to media outlets throughout the state.

If you would like to develop an activity to promote immunizations in your community, contact your regional immunization office (see pages 4 and 5) or call the MIP at (617) 522-3700 ext. 420.

CDC immunization course planned for July

The Centers for Disease Control and Prevention plans to host a course on the epidemiology, prevention, and control of vaccine-preventable diseases in Massachusetts from July 19 to 21.

The course, organized in cooperation with the Massachusetts Immunization Program and the Massachusetts Nurses Association, will feature national authorities speaking on the latest information and recommendations regarding vaccine-preventable diseases.

For more information, contact Pam Lutz, at the MIP, at (617) 522-3700 ext. 433.

Educational materials available from the Bureau of Communicable Disease

Division of Epidemiology:

Pamphlets: The immunization pamphlets are now available in large quantities in English, Spanish and Portuguese. The latest version of the Parent's Guide to Childhood Immunization is being produced.

Posters: Large quantities of the immunization posters are now available in English, Spanish and Portuguese.

Hantavirus sheet: An informational flyer about reducing the risk posed by this rodent-transmitted virus is now available.

For information about these and other educational materials, please contact your regional office or call (617) 522-3700 ext. 420.

STD Control:

Audio-visual: Clinical Series. Includes slides and videotapes of clinical presentation including the Fall STD Update Conference.

Audiocassette: Cassette available on safer sex and sexual negotiation skills. Good for the visually impaired.

Public Education Series: This includes videotapes as well as curriculums on a variety of topics including STDs, AIDS, safer sex and self esteem.

·A 1993 updated version of the Annual Report is also available.

To inquire, call Christie Burke at 522-3700 ext. 400.

TB Control:

Fact Sheet: OSHA TB Enforcement Policy (Reviews and summarizes OSHA's TB policy, promulgated October 8, 1993).

Posters: The "Think TB" poster is now available in Spanish.

Videos: There are two videos available through our video loan library: one reviews medications for patients on preventive therapy (#803), the other for curative therapy (#804).

For copies of these materials, or a complete list of materials that are available, send a request to David DeBiasi at the State Laboratory Institute, 305 South St., Boston, MA 02130

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You be the Epi!

A 5-year-old boy with asthma comes in for his fourth dose of polio and fifth dose of DTP vaccines. His mother says his usual medications include, Alupent (10mg 3 times/day) and a Beclovent inhaler (2 puffs 3 times/day). However, last week he had a "flare-up" of his asthma and had to take prednisone 20 mg once a day for 5 days. He is otherwise healthy.

His mother is concerned about how her son's steroid use might affect the immunizations. She is particularly worried about oral polio vaccine (OPV), which is a live-virus vaccine.

Analysis:

There are often questions concerning the dose of corticosteroid that will cause sufficient immunosuppression to potentially interfere with the effectiveness of vaccines (both killed and live) and to become a contraindication to the administration of live vaccines, due to possible harmful side effects.

The exact amount and duration of systemic steroid therapy needed to suppress the immune system of an otherwise healthy child is not well defined and immunosuppressive effects may vary. However, the Advisory Committee on Immunization Practices states that many experts recommend the following:

1. If a steroid dosage is the equivalent of either 2mg/kg of body weight or a total of 20mg of prednisone/day for ≥ 2 weeks, it is sufficiently immunosuppressive to raise concern about the safety of live vaccines. Corticosteroids used in greater than physiologic doses can also reduce antibody response to both live and killed vaccines.
2. If a patient receives steroids at the equivalent of either 2mg/kg of body weight or a total of 20 mg of prednisone/day, providers should wait ≥ *3* months after discontinuation of therapy before administering *live* vaccines. ***Killed*** vaccines can be administered at any time, although response may be suboptimal.
3. Steroids in lower dosages, given for < 2 weeks, given on alternate days with short-acting preparations, given in maintenance physiologic doses (replacement therapy), or given topically by cream, ointment, aerosol, or by intra-articular/bursal injection, are **NOT** contraindications to *live* vaccines. (MMWR 1993; 42/No. RR-41; 1-18.)

Although this child was on 20mg of prednisone/day, he was on it for only five days. He also uses a steroid inhaler, Beclovent. However, neither of these are contraindications to receipt of either killed or live vaccines. Therefore, he can receive both DPT and OPV.

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For Healthier Lives

Massachusetts Department of Public Health

Communicable Disease *Update*

Newsletter of the Bureau of Communicable Disease Control

Volume 2 Issue 3 July 1994

GOVERNMENT DOCUMENTS
COLLECTION
OCT 19 1994
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Vaccines for Children Program to begin in October

This is to remind providers and other agencies involved in pediatric primary care that the Vaccines for Children (VFC) Program, a new federally funded and state-operated vaccine supply program, will begin October 1, 1994. The program is intended to help raise immunization levels in the United States. The program will supply - at no cost to health care providers - federally purchased vaccine to be administered to children less than 19 years of age who are in the following categories: 1) enrolled in Medicaid, 2) uninsured, or 3) American Indian or Native Alaskan.

In addition, children who have insurance that does not cover vaccines can receive VFC-supplied vaccine at federally-qualified health centers. In Massachusetts, state and other federal funds will be used to continue to supply vaccine for all children not eligible for VFC.

For providers in Massachusetts, where we already have universal vaccine distribution, the system for ordering and accounting for vaccine will remain the same. All vaccine, including VFC vaccine, will be ordered through the Massachusetts Immunization Program. Providers will be required, however, to keep track of how many children in their practice are VFC-eligible. This information will be submitted to the Immunization Program once a year so that vaccine can be purchased by the Immunization Program with the appropriate funds.

In Massachusetts, the VFC program allow the purchase of additional vaccines and expansion of the vaccine distribution program. In states without a universal vaccine distribution program, the VFC program will remove one of the barriers to immunizations, the cost of vaccine. Information about the VFC program will be mailed to all providers in Massachusetts in July.

Rabies curriculum now available

A rabies curriculum, including background materials and activities for grades 1 through 12, is now available through the Division of Epidemiology. Call (617) 522-3700, ext. 420 to request your free copy.

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Rabies update - Raccoons . . . and Bats

The list of towns with confirmed raccoon rabies grows weekly. To date, over two-thirds of the towns and cities in Massachusetts have had laboratory confirmed rabid raccoons. Over 1000 aniamals have tested positive for rabies since the epizootic began in September of 1992. What many people forget is that rabies is carried by animals other than raccoons. Bat-strain rabies has been found in many parts of the country, including Massachusetts. Rabies was first detected in bats in Massachusetts in 1961. During the last three years, the State Laboratory has tested 492 bats for rabies, 40 tested positive, and ten humans were exposed to these bats. Since January 1994, four rabies-

See Rabies, page 2.

State TB rate drops by almost 14%!

In 1993 there were 370 new cases of tuberculosis (TB) in Massachusetts (case rate of 6.15 per 100,000 population); this represented a 13.5% decrease from 1992. **This is the lowest case rate the state has ever achieved**: the result of the increased control efforts by MDPH TB Division staff, health departments and health care providers in the Commonwealth. However, certain groups continue to be at much higher risk than the population as a whole. These risk groups are: the foreign born (49% of the cases); the homeless (5%); injection drug users (4%); persons co-infected with HIV (11%); the elderly (25%).

In 1993 there were a total of 22 "high risk communities" (communities with a seven year case rate above the state's mean case rate for the same period) - the highest of which was Chelsea (31.35). The City of Boston followed with a case rate of 20.02 - but, **this is a decrease of 10.2% since 1992 and 22.8% since 1990**. New communities added to the "high risk city" list for 1992 were Randolph and Waltham; Brookline and Medford were removed from the list.

See TB rate, page 6

STD outreach program to begin in June

As of April, a new STD clinic and outreach program began in Cambridge. Working through Cambridge Hospital and its affiliated neighborhood health centers, the program will reach out to underserved populations that may be at high risk for sexually transmitted disease (STD). Clients of the new program will be provided with STD clinic services, including partner notification, within a setting that will assure that these services will be accessible as well as culturally sensitive.

See New outreach program, page 3

EpidemiologyUpdate

Infant botulism in Massachusetts

A case of infant botulism has recently been confirmed in Massachusetts. Infant botulism was first described in 1976 and is a relatively rare disease with 74 cases reported in the United States in 1992. This is the fifth case of infant botulism to be confirmed in Massachusetts in the last ten years. The last case occurred in 1991. Unlike adult botulism, where pre-formed toxin is consumed, infant botulism occurs when infants less than one year of age ingest botulinum spores. The spores then vegetate and produce toxin in the infant's intestinal tract. In addition to infants, the disease can also occur in adults taking drugs or having surgery that alter stomach acidity or that alter normal bowel flora.

While the source of the botulinum spores in most cases of infant botulism goes unrecognized, it has been associated with the ingestion of honey and corn syrup. It has also been associated with recent soil disruption (digging, excavating) in the area near where the infant lives, which may account for a higher incidence of the disease in infants who live in rural areas.

Symptoms of infant botulism can range from mild to severe and can result in death. Prevention of most cases of this disease is not feasible, but known food sources of *C. botulinum* spores, such as honey and corn syrup and foods that contain them, should be avoided in children under one year of age. Health care providers in pediatric practices should incorporate this information into their anticipatory guidance given during visits.

Lyme disease season arrives

With the arrival of warm weather, the chance of exposure to Lyme disease increases. Lyme disease is caused by *Borrelia burgdorferi*, a bacteria carried by the common deer tick. The disease is transmitted to humans through the bite of an infected tick. Early symptoms may include a rash at the location of the tick bite (the rash will often clear in the center to form a "do-nut"), fatigue, headache, neck stiffness, sore muscles or joints, sore throat, and swollen glands. Lyme disease is treatable at any stage. However, untreated, Lyme disease can cause serious arthritis, encephalitis, or other nervous system symptoms.

Avoiding contact with ticks is the best method of preventing Lyme disease. The following precautions are suggested if you will be in an area infested with ticks (long grass, woods, dunes):

1. Wear a light colored, long-sleeved shirt, long pants tucked into socks, and sneakers.
2. Use insect repellents containing "DEET" on your skin and ones containing permethrin on clothes. READ LABELS CAREFULLY BEFORE USING.
3. Immediately upon coming inside, inspect your clothes for ticks, undress and check your hair and body for ticks. It usually takes more than 24 hours for an attached tick to transmit Lyme disease, so routine tick checks are important.
4. The deer tick is small and may look like a new "freckle." Remove a tick by gripping its body firmly by the mouth parts with a pair of tweezers and pulling straight out.
5. If you develop any of the above-mentioned symptoms, see your doctor immediately.

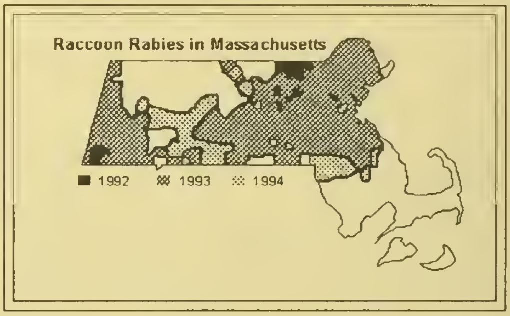
For more information on Lyme disease call (617) 522-3700, ext. 420.

Rabies post-exposure prophylaxis to be reportable

When the new state isolation and quarantine regulations are issued later this year, the initiation of rabies post-exposure prophylaxis will become reportable directly to the Massachusetts Department of Public Health. The information obtained through these reports will enable the department to analyze the amount of human exposure to rabid animals as well as evaluate the medical management of these exposures.

A hantavirus video now available

The video *A New Hantavirus* produced by the Centers for Disease Control and Prevention, Atlanta, is now available through the Massachusetts Department of Public Health, Division of Epidemiology. The video and companion booklet provide a comprehensive review of the recent hantavirus pulmonary syndrome outbreak, a clinical description of the syndrome, as well as information on laboratory diagnosis, treatment, surveillance, and prevention. Call (617) 522-3700, ext. 420 for more information.



Rabies Update

cont. from page 1

positive bats have been confirmed in Massachusetts. Since 1981, seven of the nine human rabies cases acquired in the United States were caused by bat-strain rabies. It is important that the public remember that bats are a high-risk animal and, as with any wild or stray animal, prevention is best achieved by avoiding contact with the animal. If contact with a wild animal is unavoidable, seek advice immediately from your personal physician, your local board of health, or the Massachusetts Department of Public Health (617) 522-3700, ext. 420.

Summary of confirmed rabies-positive animals since September, 1992

919 raccoons	15 woodchucks	1 coyote
97 skunks	12 foxes	8 cows
22 cats	4 bats	1 pig

STD Update

Survey and report on women and STDs under development

The Division of STD Control is developing a report on the impact of sexually transmitted disease (STD) on women. Input for the report is being sought through survey of a wide variety of those involved in women's health, including women's groups, as well as individuals working in the arena of health policy, community based health care, and direct provision of STD services. All those being surveyed are being asked to nominate other individuals active in the area of women's health to provide additional input. A panel of advisors will be convened from those surveyed who are most knowledgeable and interested in reviewing the final draft. Anyone interested in providing input into development of the report can call Christie Burke at (617) 522-3700, ext. 400 to discuss their interests.

The report will use routine surveillance data to look at statistical and demographic trends. However, it will also look at the problem within the broader social context of women's lives. Women are at particular disadvantage in regard to STDs. Biologically, most STDs are without symptoms, so women are often unaware that they are infected until secondary, more serious, complications occur. Socially, the balance of sexual power between men and women is often skewed toward the male, so that many women are less able to negotiate safer sexual practices, are less likely to know that their partner is seeing others outside of their relationship, and are less likely to be informed by their partner that they may have been exposed to an STD. Reasons such as these account for the greater levels of risk for STDs among women, and help to explain that the incidence of AIDS in women is increasing the fastest among all groups within the population.

1993 Adolescents at risk report

The 1993 Adolescents At Risk Report was released May 26. While trend data overall show a decrease in the rate of STDs, the same data shows that teens continue to be at higher risk - up to three times higher than for all age groups.

To meet this increasing challenge, the STD Division is extending STD clinical service contracts to school-based clinics as well as to organizations serving runaway and homeless teens (the Division pays for all minors seen in State-funded STD clinics). We also offer disease intervention services to teens infected with STDs. In addition, we provide educational programs both for adolescents and their providers.

Questions about out services? Call (617) 522-3700

Paul Etkind, Director, ext. 407 to inquire regarding the program and clinic services

Christie Burke, Education Coordinator, ext. 400 to inquire regarding available speakers and audiovisual/educational materials

STD/DOE focus groups address sex education needs in schools

The Department of Education (DOE) and the STD Division collaborated on an assessment of STD education in Massachusetts schools.Eight focus groups (four students, four faculty) were conducted statewide. Results were remarkably similar for all groups. Recommendations included: more time on STD education; focus on issues of risk behavior/risk avoidance rather than memorizing symptoms; expanding sexuality curriculums into earlier grades; providing skills training to teachers in sexuality education; using peer educators and other outside authorities; having similar courses for parents; teaching how to use condoms correctly and making condoms available through the schools.

STD has begun a follow up on these findings by providing training to teaching staff in STDs. In the future we hope to collaborate in the design of a full course for teachers in sexuality education.

New outreach program

cont. from page 1

The new program's nurse coordinator, Lila Coverstone, will be at each site during the scheduled clinic hours, to provide STD clinical services. In addition, each center will have an outreach worker who will provide community education and street outreach to areas where clients can be reached - such as the streets, neighborhood social centers, and bars. Outreach workers will be hired by community-based organizations serving the populations at risk. These agencies include the Haitian American Cultural Center (HACC), the Massachusetts Alliance of the Portuguese Speakers (MAPS), and Concilio Hispano. This is the first time an STD clinic contract has utilized a formal arrangement between a clinical provider and community-based outreach service. As STD morbidity continues to decline, and the people in greatest need of such services are increasingly hard-to-reach, this model offers the hope of being able to provide the impetus for additional decline in disease and infections.

Program hours are listed below. For more information, you may also call the main clinic at 498-1824.

Clinic Hours

Day	Site	Hours
Monday	East Cambridge	9-12pm
Wednesday	Windsor Street	1-5pm
Thursday	Cambridge Hosp.	
	Zinberg Clinic	1-4pm
	Riverside Hlth.	5-8pm

STD Awareness

Thanks to Nancy Burns, STD Clinic nurse in the Brightwood Riverview Clinic. Nancy was interviewed on local channel 22 for STD Awareness Month. Keep up the good work!

Regional Immunization *Updates*

Boston News: 45 New rubella cases reported

Regional Epidemiologist: Nancy Harrington (617) 534-5609

Epidemiology: Rubella cases continue to be reported in residents of the city of Boston. In addition to the 13 cases that originally occurred in the homeless shelters during the winter, 45 more cases have been confirmed as of mid-June. Adults with no history of vaccination account for 42 of the 45 cases. Most areas of the city have been affected, with East Boston reporting the greatest number of confirmed and suspect cases. Providers are reminded to report all suspect cases to the Boston Immunization Program as soon as possible after diagnosis. Bloods should be sent to the State Lab for confirmation. As part of our outbreak control efforts, MMR vaccine is available for **all** patients for whom it is not contraindicated. Contact Nancy Harrington at (617) 534-5609 for details.

Vaccine Reminder: With the advent of warm weather, providers are once again reminded that vaccine will **not** be released to their drivers/couriers unless a cooler with ice packs is presented.

Educational Notes: Priscilla McConnell, RN, BSN, has recently joined the Boston Health Department as Immunization Project Coordinator. She will be responsible for coordinating city-wide Immunization Action Plan activities designed to help increase immunization levels in the pre-school population. Priscilla can be reached at (617) 534-5611.

Metro News: Vaccine accountability promoted

Regional Epidemiologist: Lisa Berger, M.P.H. Regional Nurse: Jean Franzini, R.N. (617) 522-3700 Ext. 420

Epidemiology: The metro region continues to see new cases of rubella. For the months of March, April and May, there have been nine additional cases confirmed. The communities involved are: Cambridge, Norwood, Medford, Winthrop, and Revere. These cases ranged in age from 12 to 39 years, most of which were in their 30s. Six of the cases were male and three female. The 12-year-old was a student at a private school who had come from Europe without a rubella vaccination.

Vaccine Issues: Meetings concerning vaccine accountability have been held with health care providers and boards of health in nearly every town in the region. If you have missed a meeting or would like more information on improving vaccine accountability at your office, please call to arrange a meeting.

Educational Activities: *A Reminder*: Staff are available for presentations at health fairs, staff meetings or any other programs that are interested in immunizations. Topics include: childhood and adult immunizations, the Standards for Pediatric Immunization Practice, vaccine handling and administration techniques, and outbreak control.

Western News: Vaccine transport tips

Regional Epidemiologist: Marija Popstefanija, M.P.H. Regional Nurse: Judith Coates, R.N. (413) 545-6600

Epidemiology: During the past two months there were nine vaccine-preventable disease investigations. Seven were pertussis cases including a culture confirmed 67-year-old woman and her 48-year-old son.

Vaccine Notes: Warm weather is here. Please remember to add extra cold packs to your coolers when transporting vaccine in order to maintain the cold chain. Also, polio vaccine will defrost very quickly in warm weather. Those providers picking up large orders of vaccine are reminded to bring sufficient coolers. No vaccine will be distributed without a cooler with ice packs. IPV is now available from our office in limited quantities with restrictions. If you did not receive an order form, please give us a call. All providers are reminded to call ahead before picking up vaccine.

Immunization Materials: Many children will receive school entrance immunizations this summer. Remember, numerous educational materials are available from our office. Call and request them today!

Educational Activities: Thanks to all who attended the MNA spring meeting *Immunizations: What's New?* We hope the program gave you the tools to expand immunization services in your area.

We have also joined in partnership with the Rotary Clubs in the western region. We hope this partnership will help us to meet the year 2000 goal.

Regional Immunization *Updates*

Northeastern News: Immunization outreach in housing developments

Regional Epidemiologist: Karen Ogden, R.N. **Regional Nurse: Bertha Hopper, R.N.** **(508) 851-7261**

Epidemiology: There have been 13 cases of pertussis in our region since April. Five cases occurred in adolescents from Billerica. Five cases occurred in adults from Lowell, Billerica, and Gloucester. One case occurred in a four-month-old from Billerica; one case was in an unvaccinated eight-year-old from Marblehead; and, one case was in a ten-year-old from Beverly who had received four doses of vaccine. There were two reported cases of rubella in adults from Gloucester and Haverhill.

Thank you for prompt reporting of suspect measles and rubella. Early reporting ensures greater success of outbreak control measures in your communities.

Educational Activities: Hepatitis B education continues in DMH Programs in Lawrence. Requests for Standard Pediatric Immunization Practice presentations or immunization assessments should be directed to Bertha Hopper. Requests for vaccine preventable disease presentations or outbreak control measures should be directed to Karen Ogden. Please refer requests for enhanced injectable polio vaccine (eIPV) to Sheila Sullivan. Educational materials are available from your local board of health or our regional immunization office. Approximately 144 families with children under the age of five years received immunization brochures at two Lawrence housing developments.

Southeast News: Pertussis outbreak continues

Regional Epidemiologist: Edward Pomfred, R.N. **Regional Nurse: Joan Thompson Allen, R.N.** **(508) 947-1231**

Epidemiology: Pertussis continues to be a problem in the Southeast. There have been 15 cases reported during March, April, and May including 13 teenagers between the ages of 13 and 19 years, a one-month-old infant, and a 34-year-old adult. Up-to-date vaccination, early diagnosis, and intervention are our best defenses. Three or more doses of whole cell pertussis vaccine are 75% to 94% effective in prevention of serious illness due to pertussis in children. In adolescents and adults, pertussis often presents like chronic bronchitis. Early diagnosis and prophylaxis of all close contacts are important.

Vaccine Issues: Coolers and cold packs must be used to maintain the cold chain when picking up vaccine. If you don't bring these when you come in for vaccine, then no vaccine will be issued. Enhanced injectable polio vaccine (eIPV) is available on a limited basis for use in high-risk situations. Place your order by calling the regional office.

Educational Activities: Joan Thompson-Allen, R.N. is available to give inservices and presentations to various groups regarding current immunization practice.

Central News: Measles/rubella outbreak

Regional Epidemiologist: Jack Bicknell **Regional Nurse: Margaret Regele, R.N.** **(508) 792-7880**

Morbidity: A correctional facility in this region has experienced an outbreak of measles/rubella. Outbreak control measures were quickly instituted by the prison administration and over 1600 inmates and staff were immunized with MMR vaccine by the prison health service and local public health nurses. The facility was quarantined and no visitors were allowed. Please be on the look-out for rash illness in the community and report any suspect cases to this office immediately.

Three (3) cases of measles, all laboratory confirmed, were also seen in this region. These cases were exposed to a visitor from Germany with a rash-like illness infecting a 15-month-old, unvaccinated child and his mother. The third case was an employee of a medical facility where the child and mother were treated.

Pertussis morbidity in this region has decreased. There has not been a reported case of pertussis in the last 45 days.

Vaccine issues: There has been a slight improvement in vaccine usage reporting due to the efforts of the local boards of health. Usage reporting is still below acceptable levels. Please accurately report your vaccine usage.

Educational activities: Inservice on administration techniques and storage of vaccines is offered by the immunization nurse in the Central Region. If any clinic or private practice is interested in this presentation, please call the Central Regional Health Office.

Assessments are continuing in clinics and private practices.

ATS/CDC TB treatment guidelines revised

New ATS/CDC TB Treatment Guidelines have just been published (Am J Respir Crit Care Med 149:1359-1374, 1994). These guidelines are used by the TB Control Division, MDPH as the standard of tuberculosis care in Massachusetts. Reprints of the entire 15-page document are available through the Division ([617] 522-3700, ext. 450). In general, there are no major changes; however, the numbers of drugs and their duration has changed in certain clinical situations, based on clinical trials or consensus.

Six-month treatment with an initial two-month phase of isoniazid (INH), rifampin (RIF), ethambutol (EMB), and pyrazinamide (PZA), followed by four months of INH and RIF, is the preferred regimen for adults and children, for pulmonary and most extrapulmonary disease. An important change is that the same duration, six months, is now recommended for persons with HIV infection, if the response to therapy is satisfactory. Nine-month treatment with INH and RIF (with EMB until drug susceptibility results are known) is still considered an acceptable alternative, but longer treatment may lead to higher failure rates, if it results in non-adherence.

The ATS/CDC guidelines recommend that **consideration** be given to twice-weekly, directly observed treatment (DOT) in all cases. However, MDPH recommends individual case management, reserving DOT for cases where non-adherence is anticipated or demonstrated. To reduce the possibility partial treatment adherence, leading to drug resistance, **the combination pills Rifamate (INH 150/RIF 300) and Rifater (INH 75/RIF 150/PZA 400) should be given routinely in all cases where DOT is not used**. Rifater has just been approved by the FDA and will be available soon.

Another change is the endorsement of four-month treatment with INH and RIF in smear and culture negative cases where drug-resistance is considered unlikely. These cases occur in people with some combination of non-TB; old; inactive TB; or minimal active disease - all of which do well with only 4-month treatment. Preventive therapy for patients with stable, fibronodular densities is now the same as treatment for minimal active disease (rather than 12 months of INH).

For HIV-infected persons with a 5 mm Mantoux skin test, 12-month INH preventive therapy is still recommended. For children, nine-month INH is still recommended. Six months of INH is recommended for prophylaxis for all other eligible persons.

Baseline liver function tests are suggested for anyone receiving potentially hepatotoxic TB drugs (INH, RIF, PZA, PAS). For those at increased risk of hepatotoxicity (over age 35 years, liver disease, post-partum women) monthly liver function assessment is recommended. Monthly evaluation for symptoms of toxicity (and to encourage adherence) is strongly suggested for all patients over 35 years of age. Transient elevations in AST (SGOT) are commonly seen in 10 to 20% of persons on INH, and do not require treatment interruption in the absence of symptoms suggesting hepatitis.

Outreach workers make the difference!
Dr. DeMaria presents Joanny Perez with a certificate of appreciation during the TB Division's outreach worker appreciation day on May 2nd.

TB training scheduled

A four-day training on Tuberculosis will be held October 31 - November 3, 1994 co-sponsored by the MDPH Division of TB Control and the American Lung Association of Massachusetts. Room and board are free! The course is primarily intended for nurses who have major responsibilities for TB control activities in their setting/agency. Other professionals (e.g. outreach workers, social workers, health educators, etc.) are also invited to apply. For further information call (617) 522-3700, ext. 450.

TB rate drops

cont. from page 1

Compared with 1992, the number of reported TB cases remained stable or decreased for most age groups. The greatest decrease was in persons aged 25-44 (7%). The number of cases among the elderly (over 65) remained fairly stable. However, among children under 15 years of age, the number of cases increased from 3.7% in 1992 to 7.1% in 1993. The majority of cases in children (85%) occurred in children of color with an 8% increase from 1992.

In 1993, cases in minorities accounted for 60% of all the TB cases: black/non-hispanic 23% of cases, hispanic 13% of cases, and Asian/Pacific Islanders 24% of cases. This a 24% overall increase in cases among minorities in the last seven years, with Asian/Pacific Islanders experiencing the greatest increase. The relative risk for TB in minorities as compared to white/non-hispanic Massachusetts residents is: black/non-hispanic - 11.2; hispanic - 6.2; and Asian/Pacific Islander - 22.7.

Immunization *Update*

Immunization survey follow-up

During the fall of 1993, the Massachusetts Immunization Program (MIP) conducted a survey of acute care hospitals in the Commonwealth in order to identify measles and rubella immunization policies for healthcare workers.

Questionnaires (107) were sent to acute care hospitals with an 87% response rate. Intermediate long-term care and rehabilitation facilities were not surveyed. Follow-up telephone interviews with occupational health and/or infectious disease nurses provided additional information. Questions covered policies designed to protect employees against measles and rubella.

Regulations currently require that only employees working in maternal or newborn areas provide proof of immunity against measles and rubella. The MIP strongly recommends that **all** employees in health-care facilities provide proof of immunity against measles, mumps, and rubella. This would include: documented proof of one dose of mumps and rubella vaccine(s) given ≥ 12 months of age and two doses of measles vaccine given ≥ 12 months of age and one month apart, or serological proof of immunity. MMR vaccine rather than single antigen vaccine should be used whenever possible. A booster of Td toxoid should be given every ten years after a three dose primary series.

To prevent transmission of these vaccine-preventable diseases all health care workers, including physicians, contract personnel, and support staff must be fully immunized. One case of measles in your facility can prove to be very costly. The MIP should be notified immediately if there is any suspect rash- like illness in patients, staff, or visitors in your facility. Call (617) 522-3700 ext. 420 (24-hour emergency service). *Guidelines for the Control of Vaccine-Preventable Diseases*, Public Health Fact Sheets on diseases, and immunization materials are available from your regional epidemiologist.

Results of Hospital Survey
n= 93

Required proof of immunity for:	Number (%)of Hospitals with Policy			
	Measles		Rubella	
	No.	(%)	No.	(%)
All employees	57	(61)	64	(69)
New employees	21	(23)	11	(16)
Various employees specific to unit area, DOB, level of patient care	12	(13)	11	(12)
No policy in place	3	(3)	3	(3)

Risk of CRS increases with rubella outbreak

The rubella outbreak, which began in December 1993 continues in Massachusetts. To date, there have been over 120 cases reported, primarily in the eastern and central parts of the state. Ages range from 11 months to 72 years, with the majority occurring in young adults in their 20s and 30s. Approximately 25% of the cases have occurred in persons with Latino surnames.

At least four cases are known to have occurred in pregnant women infected in their first trimester. After counseling, three of the four elected to terminate their pregnancies. Other cases may have gone undetected since rash is present in only 50% of cases.

General control measures such as immunizing all women of childbearing age and all other children and adults without written documented proof of immunity were outlined in a previous newsletter. Rubella should be suspected in all patients presenting with rash illness or with fever, arthralgia/arthritis, postauricular/occipital adenopathy or other symptoms suggestive of rubella.

Diagnostic resources are available at the State Laboratory Institute (SLI) to assist with your evaluation and management of susceptible pregnant women, particularly those in the first trimester, with symptoms suggestive of rubella. Immunity should be documented in all pregnant women by obtaining an IgG titer for rubella. Non-immune pregnant women with suspect rubella should have an IgM titer for rubella drawn on day three of rash and, if positive, the result should be confirmed with a second IgM titer. Specimens can be sent to the Virology Lab at the SLI. This type of aggressive case finding will be particularly helpful in identifying subclinical cases during the first trimester when the fetus is most at risk.

All suspect cases of rubella and congenital rubella syndrome (CRS) should be reported immediately to the Immunization Program at (617) 522-3700, ext. 420. It is essential to document the extent of disease and the potential impact of this rubella outbreak on the incidences of CRS.

MMR survey shows missed opportunities

As the result of the recent rubella outbreak in Massachusetts, a telephone survey of hospitals with maternity services was conducted. Our goal was to ascertain compliance with current American College of Gynecologists and Obstetricians (ACOG) and the Advisory Committee of Immunization Practices (ACIP) recommendations to vaccinate all susceptible post-partum women with combination measles, mumps, rubella (MMR) prior to discharge from the hospital.

A survey of 51 of the 56 hospitals with maternity services revealed that 31 (61%) of the hospitals administered single-antigen rubella vaccine to susceptible postpartum women. Only 15 (29%) of the hospitals reported always administering MMR in accordance with the ACOG/ACIP recommendations.

Using single-antigen vaccines results in "missed opportunities" to protect women of childbearing age against measles and mumps, leaving women susceptible to these potentially serious diseases. We encourage you to review your current policy for immunization of women susceptible to rubella and to bring into compliance with current recommendations.

In order to ensure that MMR vaccine cost is not a barrier to implementing this recommendation, the Massachusetts Immunization Program is making MMR vaccine available to hospitals for immunization of postpartum women. Hospital pharmacies may order MMR vaccine from their local immunization depot.

Tips for Summer Safety

Prevent Foodborn Illness: Store it cold, cook it hot!

Foodborne illness is a preventable disease, yet it affects thousands of people every year. Last year in Massachusetts nearly 4,000 people were afflicted with either campylobacteriosis or salmonellosis. The majority of cases were reported during June to September. Follow the guidelines below to remain foodborne illness free!

-Do not prepare food for others if you are ill.
-Wash hands prior to food preparation. Wash and sanitize equipment between preparing raw and cooked foods.
-Prepare foods close to serving time, cooking hot foods *thoroughly* and using pre-chilled ingredients for cold dishes.
-After barbecuing, discard any leftover marinades or sauces, and wash all dishes and utensils used on raw foods.
-Use extreme care when harvesting shellfish for human consumption. **For current recorded advisories on unsafe shellfish harvesting areas, call (508) 465-5947**.

Rabies Prevention: Teach children to avoid wildlife and stray animals

As raccoon rabies continues to spread throughout Massachusetts, the risk of rabies to people and pets continues to rise. Children are at particular risk because they are more likely to be bitten by animals, and the bites they receive are generally more severe, often involving the face and hands. Also, children are less accurate reporters of their own exposures to animals. To reduce their risk of rabies:

-Avoid strays and wild animals. Don't feed unknown animals.
-Vaccinate your cats and dogs. Do not leave pet food in your yard, it attracks stray and wild animals. Do not allow pets to roam free.
-Wear gloves while handling pets that have been wounded by other animals.
-Secure trash cans and cap your chimney so animals cannot get into them.
-If you are exposed to a potentially rabid animal, call your physician, local board of health, or the Massachusetts Department of Public Health, Division of Epidemiology (617) 522-3700, ext. 420 for information.

Communicable Disease *Update*
State Laboratory Institute
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Boston, MA 02130

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You be the Epi!

It has been reported to you by a school nurse that a 10-year-old child in the fourth grade has been admitted to a local hospital with meningitis. The school nurse does not know what type of meningitis has been diagnosed but is already getting calls from worried parents. She needs to know what to do.

On calling the hospital you learn that the child has indeed been admitted with meningitis. A gram stain of the child's CSF has shown gram positive diplococci and the bacterial antigen test is positive for *Streptococcus pneumoniae*. The culture results will not be ready for another 24 hours. How should you advise the health nurse to proceed?

Analysis

The combination of seeing gram positive diplococci on gram stain and a positive bacterial antigen screen for *Streptococcus pneumoniae* is sufficient evidence for presuming that this meningitis is being caused by this organism. Unlike invasive disease caused by other bacteria such as *Neisseria meningitidis* and *Haemophilus influenzae* type b (Hib), person-to-person spread resulting in secondary cases of invasive pneumococcal disease is rare. Also, unlike meningococcal disease and Hib illness, the role of nasopharyngeal carriage in the etiology and spread of this disease is **not** well documented. For these reasons, there are no recommendations for routine antibiotic prophylaxis of contacts of cases of invasive strep disease. You should tell the nurse that while she can reassure parents that this is not normally considered to be contagious, any severe illness in their children should be evaluated by a health care provider.

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For Healthier Lives

Massachusetts Department of Public Health
Communicable Disease *Update*

Newsletter of the Bureau of Communicable Disease Control

Volume 2 Issue 4 October 1994

University of Massachusetts
Depository Copy

Risk of Congenital Rubella Syndrome increases with rubella outbreak

The rubella outbreak in Massachusetts, which began in December 1993, has resulted in 132 cases to date. Ages range from 11 months to 72 years, with the majority of cases occurring in young adults in their 20s and 30s. Forty percent of the cases with reported ethnicity are Hispanic. At least four cases of rubella are known to have occurred in pregnant women infected during their first trimester. After counseling, three of the four elected to terminate their pregnancies.

Rubella is highly contagious. It is a mild disease in most people and up to half of the cases do not have a rash. Infection of a pregnant woman during the first trimester, however, often results in congenital anomalies in the infant. Studies have shown that, if followed for at least two years, defects associated with Congenital Rubella Syndrome (CRS) can be found in up to 85% of children born to women infected during the first trimester. This delayed presentation in children, who appeared normal at birth, was recently described after a rubella outbreak in Pennsylvania in 1991-92.

Because pregnant women may have been infected without knowing it, health care providers must be particularly vigilant for any signs of CRS. The first cases of CRS from this recent outbreak may be expected to occur in children born in August and September (resulting from the earliest rubella cases in December and January). Cases of CRS could continue to occur for at least nine months after the last rubella case. Diagnostic resources are available at the State Laboratory Institute (SLI) to assist with evaluation and management of suspect cases of CRS. **Any baby with suspect CRS should be placed immediately on contact and respiratory isolation.** CRS babies excrete large numbers of viruses.

In order to assist you with surveillance for CRS, the case definition for possible, compatible and confirmed cases may be found on page 7. It is essential to document the potential impact of this rubella outbreak on the incidence of CRS. Report all suspect cases and please address any questions to the Division of Epidemiology and Immunization at (617) 522-3700, ext. 420. (See page 7 for the clinical case definition of CRS.)

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Cats and rabies - a continuing threat

Rabies continues to be a problem in Massachusetts, with a total of 123 animals testing positive for rabies and almost three-quarters of the towns and cities in the state affected.

Despite a law requiring cat owners to vaccinate their pets, unvaccinated cats continue to pose a health threat by acting as a bridge between rabid wildlife and the human population. Only one-third of cats exposed to rabid animals are currently vaccinated.

This problem was exemplified in August when a cat, residing in a place of business developed rabies. The cat was adopted by the business owner two months before it developed rabies. No vaccination history was obtained when the cat was adopted. Unknown to the new owner, the unvaccinated cat was under a 6-month quarantine order due to a wound of unknown origin received four months earlier. At the time of the wound, the cat was considered unvaccinated. At least 16 individuals who had significant exposure to the cat during the 10 days prior to development of signs of rabies have undergone rabies post-exposure prophylaxis.

This incident highlights several precautions to take in controlling the spread of rabies:

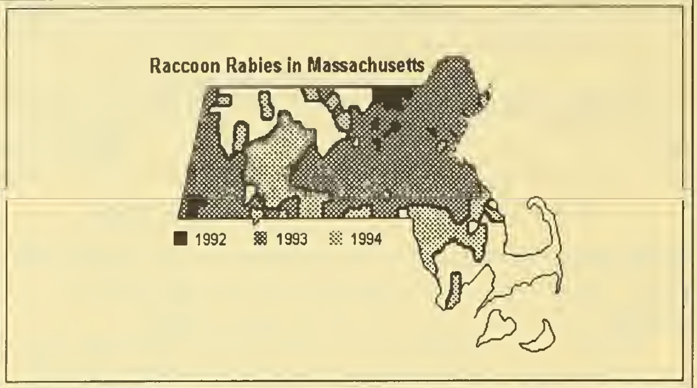
- keep your pet's rabies vaccinations up-to-date (check with your veterinarian to ensure vaccinations are current)
- if you adopt a pet, determine the animal's vaccination history. If no vaccination history is available, consult your local animal control officer or the Department of Food and Agriculture, Bureau of Animal Health to determine the proper procedures to ensure your animal is healthy and currently vaccinated so you and your family are protected.
- if your animal is placed in quarantine, strictly follow the quarantine requirements. Relocating a quarantined animal is not allowed.

See Rabies and cats, page 2

National STD conference

CDC's National STD/HIV Prevention Grantee's Conference was held in Washington DC August 22-26. The Massachusetts Division of STD Control presented eight posters (of a total of 60 displayed), including: adolescents and STDs; evaluation of STD education in schools; efficacy of TB screening in STD clinics; contracting for clinical services; risk factors for neonatal chlamydial infections; findings from a match of the STD and AIDS databases; risks of AIDS among people with a history of chancroid versus any other STD; and improvements in surveillance through electronic integration of clinical and laboratory reporting. In addition, an STD staff member presented on a cluster of STDs (primarily syphilis and HIV) among older adults in the Springfield area. The volume of work presented, as well as the quality of the work, generated much praise and discussion. Highlights of the conference are detailed on page 3.

EpidemiologyUpdate



Oral rabies vaccine trial underway

As the front of the rabies epizootic moves southeast (see map above), the efficacy of the ongoing oral rabies vaccine trial may soon be tested. Tufts University Veterinary School, in cooperation with the Department of Public Health, has undertaken a trial of an experimental oral rabies vaccine for raccoons. During April and May, 18,000 fishmeal baits containing an oral rabies vaccine were distributed on either side of the Cape Cod Canal. Raccoons that consumed the baits are vaccinated against rabies. The purpose of the trial is to create a buffer zone of vaccinated raccoons on either side of the canal in hopes of stopping the spread of rabies onto Cape Cod.

The second phase of the trial began in June. Two hundred and eighty animals were trapped and blood samples were taken from the animals. The Center for Disease Control and Prevention in Atlanta is currently testing the blood samples to determine the animal's immunity to the rabies virus. Since the vaccine has not yet received USDA approval, permission for the distribution of a second round of vaccine-filled baits is now being sought from the USDA, with distribution scheduled for November. Oral vaccines have been successful in controlling fox rabies in Europe and Canada. Watch for updates on the trial in future issues of Communicable Disease *Update*.

Rabies and cats

cont. from page 1

For more information about quarantine regulations, contact your local animal control officer or the Department of Food and Agriculture, Bureau of Animal Health.

In Massachusetts, over one-fourth of the rabies-positive cats were stray animals acquired by their owners within 3 weeks of developing clinical rabies. It is important that people be aware of the possible risks of adopting stray animals. If you do adopt a stray animal, have the animal examined by a veterinarian for wounds of unknown origin and be advised that a cat may incubate rabies for up to 6 months. If the animal becomes sick or exhibits a change in behavior, call your veterinarian immediately. Advice concerning human exposures to rabid or suspect rabid animals may be obtained from your physician, local board of health, or the Massachusetts Department of Public Health, Division of Epidemiology. For more information on cats and rabies, see You Be The Epi on page 8.

Two *Salmonella enteritidis* outbreaks

After eating several different food items from a sub shop between June 12, 1994 and June 22, 1994, 31 patrons were culture confirmed with *Salmonella enteritidis* (Se). In addition, 14 patrons were symptomatic, but not culture confirmed. The local board of health conducted a physical inspection and the restaurant was closed for two weeks. All symptomatic patrons were interviewed but no common food item could be implicated. It is possible that inadequate foodhandling practices played a role in this outbreak.

A second outbreak of Se occurred on Cape Cod from July 1, 1994 to July 22, 1994 - 21 out of 36 foodhandlers at a restaurant and 11 other employees at an associated resort were culture confirmed for Se. In addition, 28 patrons from six states were also culture confirmed for Se, for a total of 60 known, confirmed cases. Food items eaten included egg dishes, pasta dishes, hot dogs, hamburgers, salads, and sandwiches. The restaurant was closed by the local board of health and a safe foodhandling course was administered to all employees of the establishment.

These two outbreaks stress the importance of educating foodhandlers about safe foodhandling practices.

Holiday food safety at home

Once again, as the holidays approach, it is time to think about ensuring that holiday feasting is both delicious and safe. Because of their popularity at Thanksgiving and Christmas, turkey meals and pot-luck parties are particular occasions where food safety rules are most important. Follow these rules and help everyone have a safe and healthy holiday.

1. Prepare food with clean hands, work surfaces and utensils. Wash them often during food preparation.
2. Keep menus simple for large parties. Avoid elaborate food items. Foods that are safest to prepare at home and bring to parties include bread products, fruit pies, plain cakes, fruit salads and tossed salads.
3. Avoid serving egg dishes that are not thoroughly cooked.
4. Before cooking a frozen turkey, allow it to thaw slowly in its original wrapping inside the refrigerator, or use a fresh one!
5. Prepare foods as close to serving time as possible using pre-chilled ingredients for cold dishes. Make use of hot plates and ice to keep hot foods hot (above 140° F.) and cold foods cold (below 40° F.) **before** and **during** serving time.
6. Cook turkey, stuffed or not, to an internal temperature of 180° F. Consider cooking stuffing outside the bird.
7. Discard leftovers that can't be refrigerated at or below 40° F. immediately after serving.

The United States Department of Agriculture publishes the booklet, "Talking about Turkey: How to buy, store, thaw, stuff and prepare your holiday bird." For more information call the USDA Meat and Poultry Hotline from 10 - 4 at 1-800-535-4555.

Raccoon Rabies Update

Summary of confirmed rabies-positive animals since September, 1992

1031 raccoons	21 woodchucks	9 cows
126 skunks	13 foxes	1 pig
28 cats	2 coyote	1 horse

257 out of 351 towns and cities have reported confirmed rabid animals

STD Update

Highlights of national conference

cont. from page 1

STD/HIV Interactions:
Dr. King Holmes of Seattle described additional evidence of HIV/STD interaction. HIV virus load in genital fluid is three to five times higher in the presence of a concurrent gc infection. Thus, controlling other STDs will render HIV-infected people less infectious.

Integration of HIV/STD:
Prevention efforts could benefit from integration of HIV and other STD interventions, especially since reduction of STD transmission will reduce HIV transmission. STD programs could increase prevention capacity by adopting use of peer education, support groups, and case management. Integration of effort is hampered by restrictions due to categorical funding.

Counseling and Testing as Prevention Tools:
There is no outcome data that shows to what extent a counseling session can/will alter risky behaviors. CDC is promoting "client-centered" counseling which focuses on why the client thinks he/she is at risk, and concentrates on providing guidance on how to reduce such risks.

CDC is urging extension of the counseling component of counseling and testing. Many people may be too focused on the test result, not on the prevention message. The goal should be effective, behavior-changing counseling rather than increased number of tests.

TRAINING ANNOUNCEMENTS

STD Update 1994: Current Problems and Future Directions. Featured presentation: Pregnancy and STDs-HIV, with Jack Moye, MD, National Institutes of Health, Thursday, November 17, 8:30 - 3:30 p.m., Colonial Hilton, Wakefield, MA. For further information or registration, call the Massachusetts Medical Society, (617) 893-4610, ext. 1342.

Sexuality Education: Truth, Justice and the American Way, conference of the PURPOSE Campaign of the Planned Parenthood League of Massachusetts, Friday, December 9, 9:00 - 4:00, Best Western Royal Plaza Hotel in Marlboro. For further information or registration, call Rev. Dorothy Kimble at (617) 492-0518.

Partner Notification (PN):
There was frustration regarding the lack of acceptance of PN as an HIV prevention tool. It was proposed that the model of PN based on bacterial STDs (one or two interviews) does not meet the needs of people with chronic viral infections. Different models involving several visits following a post-test counseling session, with a case-management approach to client relations, might be more effective. CDC requested that results of any assessments of the impact of HIV PN be disseminated immediately.

Assessment:
There was a demand for more rigorous assessment of prevention efforts. As much can be learned from what doesn't work as from what does.

Peer Education:
Professor Jeffrey Kelly of Wisconsin lectured about the great potential of peer education as a prevention tool. His very impressive results from a peer-education intervention among gay men in smaller cities showed the way in which peer leaders can help change community norms and influence behaviors.

Professionalism and HIV/STD:
Randy Miller, Executive Director of the National Task Force on AIDS Prevention spoke about the different perspectives that professionals, careerists and advocates bring to the field.

The meeting was rewarding in terms of recognition of the work being done in Massachusetts, as well as in the ideas generated. We are actively considering many of these ideas for further refinement of activities.

STD/HIV prevention-based counseling

Beginning this Fall, training in client-centered counseling will be emphasized to STD clinic staff who provide pre- and post-test counseling for HIV. Client-centered counseling involves tailoring prevention and counseling messages to match individual client risks and behaviors. The goal is for staff to develop individualized risk perception and risk reduction plans for each client that will be effective in promoting risk understanding and behavior change. Michael Whelan will be working with clinic staff to assess current counseling practices and training needs.

Female condom to be evaluated

The Division of STD Control has an interest in evaluating and promoting the availability and use of the recently licensed female condom. The Division has pursued federal funding, in collaboration with the School of Public Health at the University of Massachusetts, to conduct an assessment of the acceptance of the female condom. CDC has recently approved the latest proposal. In a similar project, the Division is very pleased to act as a technical advisor to Women, Inc. of Boston, which was recently awarded funds from the Department of Public Health to perform a Boston-based evaluation of the female condom. Updates will be provided in a future edition of Communicable Disease *Update*.

Regional Immunization *Updates*

Boston News: Last rubella rash onset June 18

Regional Epidemiologist: Nancy Harrington (617) 534-5609

Epidemiology: The last rash onset of a confirmed case of rubella in a Boston resident was on June 18. Of the State's total of 130 confirmed cases, 60 occurred in residents of Boston (15 of them were in individuals associated with the homeless shelters, 45 were in the general community). Fifty-eight of the 60 cases were in adults. Although the outbreak appears to be over, it is expected that there will be infants born to mothers who were inapparently infected during their pregnancies. Possible cases of Congenital Rubella Syndrome (CRS) can be expected to occur for nine months after the first onset in December 1993. The Massachusetts Department of Public Health has issued diagnostic and outbreak control guidelines regarding CRS that can be obtained by calling Nancy Harrington at 534-5609.

Vaccine Issues: Influenza vaccine will be available for providers in Boston at the end of October. If you have not received an order form or other informational material, please call 534-5609.

Educational notes: The Boston Immunization epidemiologist is available for inservices and presentations regarding vaccine-preventable diseases and other vaccine-associated topics. Also, providers are reminded that the committees of the Boston Immunization Coalition continue to meet on a regular basis. Contact Priscilla McConnell at 534-5611 for more information.

Metro News: Aggressive control measures prevent spread of mealses and pertussis

Regional Epidemiologist: Lisa Berger, M.P.H. **Regional Nurses: Jean Franzini, R.N. and Peg OToole, R.N.**
(617) 522-3700 Ext. 420

Epidemiology: During the last quarter, there was a pertussis outbreak in an adolescent psychiatric unit at an urban hospital. Two cases were serologically confirmed and seven cases were epidemiologically linked. Aggressive control measures were implemented immediately throughout the hospital and no further cases were identified.

We also investigated a suspect case of measles at a state correctional facility. Aggressive control measures were put into place immediately. Ninety-one percent of all staff and inmates were vaccinated with MMR vaccine within two days of notification.

Thank you to everyone who was involved with and helped in these investigations!

Educational Activities: The Metro Region Immunization Round Table will be held on October 13, 1994 from 1-3 PM. It will be at the Natick Town Hall Auditorium at 13 East Central Street. We will be discussing the new Vaccine for Children Program, the Hepatitis B Vaccination Program for fifth grade students in a public school system, and vaccine preventable disease morbidity. We welcome any other suggestions and participation.

Western News: Immunization guidelines and VFC materials now available

Regional Epidemiologist: Marija Popstefanija, M.P.H. **Regional Nurse: Judith Coates, R.N.** **(413) 545-6600**

Epidemiology: Since July, there have been five measles investigations in which two cases were confirmed. Three pertussis cases were also investigated; all confirmed (two serologically and one culture positive). The culture confirmed case of pertussis was in a 3½-month-old child immunized with one DTP.

Vaccine Notes: Health care providers are reminded that pediatric DT vaccine supplied by the MDPH should be administered only to those children under the age of 7 years with medical contraindications to the DTP vaccine. The vaccine is not to be used as an alternative to DTP or for parental choice. The distribution and usage of this vaccine is closely monitored by the MDPH.

The new August 1994 Guidelines of the Immunization Program (immunization requirements and schedules) are now available. Please give us a call if you would like a copy.

Educational Activities: The Vaccine for Children Program (VFC) commenced on October 1. Packets for this program have been mailed to all public and private providers. Please feel free to give us a call if you have any questions regarding this program. Public clinics may pick up the new consent forms in quantity from our office.

The new vaccine usage reports along with numerous educational materials are also available in quantity.

Thanks to those who attend the regional immunization round tables. If you have any suggestions for future programs, please contact J. Coates, R.N. or M. Popstefanija at the Western Regional Office.

Presentations regarding current immunization practices remain available upon request. Please contact the office for further information.

Regional Immunization *Updates*

Northeastern News: Confirmed case of congenital rubella syndrome in Stoneham

Regional Epidemiologist: Karen Ogden, R.N. **Regional Nurse: Bertha Hopper, R.N.** **(508) 851-7261**

Epidemiology: Twelve cases of pertussis were reported in the northeast region from June through August. Two cases were in adolescents in Billerica and one in Beverly. In Gloucester, a 3-year-old and a 9-year-old were confirmed with pertussis. Each child had received one dose of DTP. Two epi-linked cases from Gloucester were reported in 65 and 85-year-old golf partners. Two partially vaccinated siblings in North Andover, 3 and 6 years old, were also reported. Cases were also reported in a fully vaccinated 10-year-old from Danvers, a 6-year-old from Dracut with history of one dose of vaccine, and an unvaccinated 9-year-old from Peabody.

Five cases of rubella were reported in unvaccinated males in Middleton.

There has been one confirmed case of congenital rubella syndrome in a newborn born in Stoneham. The family is visiting from overseas, and the mother had a history of a viral-like illness early in her pregnancy. The baby presented with glaucoma and patent ductus arteriosis. Laboratory testing for IgM antibodies to rubella was positive.

Please continue to assess immunization records at every opportunity and vaccinate as necessary.

Educational Activities: Standards for Pediatric Immunization Practices (SPIP) presentations are available to all public and private providers. Call Bertha to arrange a presentation or clinic assessment. Any hospital interested in arranging a Grand Rounds immunization update, call Karen.

Southeast News: 2 Cases of mumps in campers on Cape Cod

Regional Epidemiologist: Edward Pomfred, R.N. **Regional Nurses: Joan Thompson Allen, R.N. and Sonia Kobrin, R.N.** **(508) 947-1231**

Epidemiology: Fourteen confirmed pertussis cases have been reported in the Southeast Region since June, including a 4-month-old and a 9-year-old who required hospitalization for complications of pertussis. Two isolated cases of laboratory-confirmed rubella were reported. No secondary spread was identified. Two laboratory confirmed cases of mumps have been reported from the Southeast Region. The first case occurred in a vaccinated 10-year-old female from Mexico who attended a camp on Cape Cod. She presented with bilateral parotid swelling five days after arriving in the country. One hundred fifty campers and fifty counselors and staff were evaluated for immunity. A second case in a vaccinated 8-year-old camper was reported three weeks after the first case. No further spread was reported thanks to the aggressive control measures carried out by the camp staff and health care providers in the area.

If you have any questions regarding diagnosis or treatment of these vaccine preventable diseases, feel free to give us a call. The Guidelines for the Control of Vaccine Preventable Diseases is also available at this office.

Outreach Activities: The semi-annual regional immunization round table meeting will be held October 5 at the Taunton Galleria Mall Community Room from 2-4 PM. If anyone wants an Immunization Update inservice, please call Joan or Sonia. On September 27, the New Bedford CHNA (Community Health Network Area) will present a report to the Public Health Council at St. Luke's Hospital in New Bedford at 10 AM. The public is invited.

Central News: Rubella in a correctional facility

Regional Epidemiologist: Jack Bicknell **Regional Nurse: Patricia Reynolds-Caouette, R.N.** **(508) 792-7880**

Epidemiology: The outbreak of rubella at a correctional facility in this region resulted in 11 (10 inmates, 1 guard) laboratory-confirmed cases of rubella. Due to the aggressive outbreak control measures instituted by this facility (approximately 3,000 doses of MMR vaccine administered), no reported cases of rubella have been seen in the community.

Sporadic cases of pertussis continue. The majority of these cases have been in central Worcester County.

Educational Activities: Patricia Reynolds Caouette, BSN, RN has recently joined the Massachusetts Department of Public Health Immunization Program as its Central Region Immunization Nurse. She will provide inservices on immunization administration techniques, storage of vaccines, and Standard Pediatric Immunization Practice presentations. She is also available to assist with Practice-based Immunization Assessment. Help us meet our year 2000 goal - get involved!

Vaccine Issues: Vaccine for Children enrollment packets have been mailed to all vaccine providers. Please be sure to complete them and return them as soon as possible. If you have any questions, do not hesitate to call us here at the Regional Office. Vaccine Usage Reports and Order Forms must be submitted before vaccine will be released. Please adhere to this request. Congratulations to those providers who have improved on their vaccine usage reporting. Your efforts are greatly appreciated.

TB *Update*

Controlling TB in Boston's homeless

In Boston, homeless persons have been at particularly high risk for tuberculosis. Since 1984, 170 cases of TB have been verified among the homeless accounting for more than 10% of TB cases in Boston.

Tuberculosis management for this population is complicated by many issues that interfere with case finding and treatment. Substance abuse, psychiatric illness and other medical conditions, malnutrition, lack of access to health care, self-directed priorities, and crowded living conditions in shelters, all contribute to the risk for development of active disease in infected persons and subsequent spread of infection. Early recognition of symptoms and signs of TB is essential, so that treatment can be initiated and the number of infected contacts is minimized. Once begun on therapy, persons with active TB must take at least six months of medication as prescribed in order to effect a cure and to minimize the risk of development of drug resistance. To enforce compliance with treatment of active TB, nursing case-management and directly observed therapy on-site in shelters is used. This is supplemented by the use of incentives. The Boston TB Program now offers incentives to all homeless patients with *disease*, and under this system, more than 95% of homeless persons with active TB in Boston now complete prescribed therapy.

Tuberculosis is a preventable disease, and the key to ultimate reduction in future case numbers is to offer preventive therapy to high-risk persons. Experience with preventive treatment of homeless persons unfortunately has been less than encouraging. In 1990, the Boston TB Program (with the assistance of a special grant) implemented an incentive program which has dramatically improved adherence with preventive therapy among homeless patients. For this project, homeless persons with TB infection (or persons at risk for TB, e.g., anergic with risk factors, contacts to an infectious case, etc.), for whom a course of preventive therapy was recommended, and who agreed to enroll, signed a contract agreeing to conditions. Directly observed preventive therapy was then administered, usually at a clinic or shelter site. Clients received the equivalent of $6.00 for signing the contract, $6.00 for each venipuncture (done for monitoring liver function), and $6.00 for each week of completed therapy. Clients were allowed to choose to receive renumeration in the form of cash vouchers, fast food coupons, articles of clothing, or MBTA passes and tokens. The Boston Program also offered to "bank" the weekly incentives for clients saving for a special reason. For example, a homeless man had applied for housing and was scheduled to move into a room at the local YMCA. Because his room would have no cooking facilities, he chose to allow his cash vouchers to accumulate until he had enough money banked to purchase a microwave oven.

Eighty persons (61%) either have completed treatment or are currently receiving treatment. This data, when compared to findings reported elsewhere in the country where incentives are used, suggest that success can be achieved in the delivery of preventive therapy to this high-risk population.

Tuberculosis remains an important issue among Boston's homeless. Intense efforts by the State and Boston TB Programs and the continued collaboration between shelter staff, primary care providers, and tuberculosis-public health specialists, using creative approaches to deliver treatment and preventive therapy, should result in continued declining case rates among the city's homeless.

The TB Division wishes to acknowledge John Bernardo, MD from the Boston TB Program for contributing to this article.

New TB reporting regs

Effective July 29, 1994, regulations were promulgated mandating "any health care provider, laboratory, board of health, or administrator of a city, state or private institution or hospital" to report within 24 hours any "confirmed tuberculosis or clinically suspected tuberculosis" cases directly to the state, as recommended by the Massachusetts Commisssion for the Elimination of Tuberculosis. These regulations include dual reporting of residents of the City of Boston to both the state Division of TB Control and to the Boston Department of Health and Hospitals. In preparation for central reporting of TB cases directly to the state, a system has been implemented in the TB Surveillance Unit to notify the local health departments of all new reports within 24 working hours of receipt of such notice. Cases can be reported using the toll-free 24-hour reporting hotline - 800-446-3528 or by mail.

ATTENTION!

The long awaited *CDC Guidelines for Preventing the Transmission of Tuberculosis in Health-Care Facilities* will be published in an October issue of *MMWR.* Reprints will be available through the Division of TB Control.

A conference entitled "Tuberculosis: A treatment and infection control update" will address the above-mentioned guidelines (and their implications for OSHA mandates), as well as the new ATS/CDC treatment statement. The conference will be held at the State Lab Institute in Jamaica Plain on November 4, 1994. Call 522-3700, ext. 454 for further information.

New public health regulations for TB

Three sections of the TB Regulations were recently updated and approved by the Public Health Council. *Standards for Management of Tuberculosis Outside Hospitals* updates outpatient case management to reflect current recommendations from the federal Centers for Disease Control and Prevention. *Determining Active Tuberculosis* clarifies the meaning of "active" TB for the purpose of involuntary hospitalizations allowed under Massachusetts General Laws. *Tuberculosis Treatment Unit Standards for Admission, Treatment and Discharge* refers to admissions to Lemuel Shattuck Hospital for patients who cannot be managed in the outpatient setting. Please call the Division of Tuberculosis Control at 522-3700, ext. 450/454 to request a copy of these new regulations.

Immunization *Update*

Congenital rubella syndrome case definition (CRS)

cont. from page 1

In order to assist you with surveillance for CRS, please refer to the outline below. The case definition for possible, compatible, and confirmed cases of CRS, as defined by the Centers for Disease Control and Prevention, is as follows:

Clinical Description

An illness of newborns resulting from rubella infection in utero and characterized by symptoms from the following categories:

A. cataracts/congenital glaucoma, congenial heart disease, loss of hearing, pigmentary retinopathy

Associated symptoms may be:

B. purpura, splenomegaly, jaundice, microcephaly, mental retardation, meningoencephalitis, radiolucent bone disease

Clinical Case Definition

Presence of any defects or laboratory data consistent with congenital rubella infection (as reported by a health professional).

Laboratory Criteria for Diagnosis

Isolation of rubella virus, or

Demonstration of rubella-specific IgM antibody, or

An infant's rubella antibody level that persists above and beyond that expected from passive transfer of maternal antibody (i.e., rubella HI titer that does not drop at the expected rate of a twofold dilution per month).

Case Classification

Possible: a case with some compatible clinical findings but not meeting the criteria for a compatible case.

Compatible: a case that is not laboratory confirmed and that has any two complications listed in (A) above, or one complication from (A) and one from (B).

Confirmed: a clinically compatible case that is laboratory confirmed.

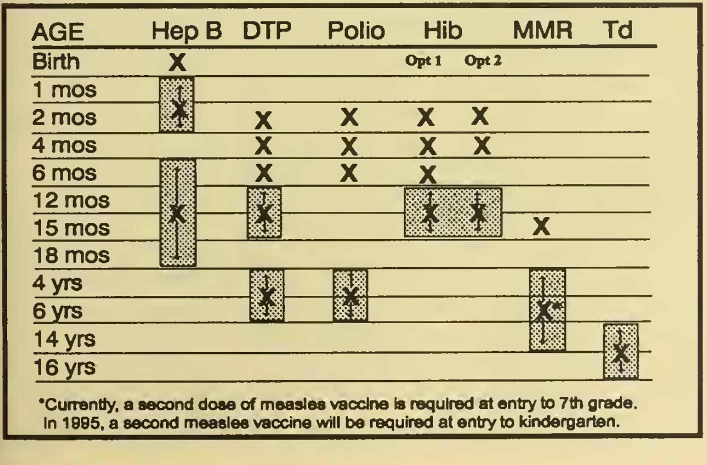
Comment

In compatible cases, either or both of the eye-related findings (cataracts and congenital glaucoma) count as a single complication.

(From CDC Case Definition for Public Health Surveillance. MMWR 1990; 39:32)

1994 MDPH immunization schedule

(Shaded areas denote timing options.)



AGE	Hep B	DTP	Polio	Hib Opt 1	Hib Opt 2	MMR	Td
Birth	X						
1 mos	▨						
2 mos	▨ X	X	X	X	X		
4 mos		X	X	X	X		
6 mos	▨	X	X	X			
12 mos	▨ X	▨ X		▨ X	▨ X		
15 mos	▨	▨		▨	▨	X	
18 mos	▨						
4 yrs		▨ X	▨ X			▨	
6 yrs		▨	▨			▨ X*	
14 yrs						▨	▨ X
16 yrs							▨

*Currently, a second dose of measles vaccine is required at entry to 7th grade. In 1995, a second measles vaccine will be required at entry to kindergarten.

Adult immunization week - October 23-29

The week of October 23-29, 1994 has been designated as National Adult Immunization Awareness Week. This is an ideal time for clinicians to assess their patients immunization status and make sure their patients are up-to-date on all immunizations.

Thousands of adults in this country are unprotected from the dangers of vaccine-preventable diseases. Influenza, pneumococcal disease and hepatitis B account for the majority of vaccine preventable deaths in the United States. The risk of death from these diseases is as much as 60 times greater for adults than for children. Annually, there are an estimated 10,000-40,000 influenza associated deaths during the influenza season. Pneumococcal infection results in 40,000 deaths and as many as 120,000 hospitalizations annually. Chronic hepatitis B-related liver disease and primary liver carcinoma account for 4,000 to 5,000 deaths annually.

During the rubella outbreak this year, with 130 confirmed cases of rubella, 80% of the cases were in adults 18 years-of-age and older. This is evidence that many young adults are not protected against rubella, and probably not protected against measles and mumps as well. Boosters of Td toxoid should be administered to adults every 10 years after the primary series of three. If you have no record of a primary series being given, begin by administering the primary series because many elders have not received it.

At flu clinics this year, evaluate the patient's entire immunization record and vaccinate accordingly. An opportunity to vaccinate that is missed can be just as serious in an adult as in a child; you may not get a second chance.

Who is eligible for MIP-supplied hep B vaccine?

Health care providers must cooperate with the Massachusetts Immunization Program (MIP) to ensure the continuing success of universal infant hepatitis B vaccination. The MIP currently provides hepatitis B vaccine for children born on or after January 1, 1992. According to the second quarter Vaccine Usage Report, 4.5% of the MIP-supplied hepatitis B vaccine was reported to have been administered to people born before January 1, 1992. This means that as many as 6,000 doses of hepatitis B vaccine were used inappropriately. Health care providers must administer MIP-supplied vaccine only to children born on or after January 1, 1992, while encouraging people born before this date to seek hepatitis B vaccine through other sources.

TRAINING ANNOUNCEMENT

Immunizations: What's New . . .

November 9, 1994, 9:00 am to 1:00 pm

U Mass Medical Center, Worcester

This program will address the changes in immunization standards of practice, review vaccine administration techniques, and provide an update on current trends in immunization. For more information, contact Cheryl Bushnell at (617) 522-3700, ext. 420.

Communicable Disease *Updates* 1993/1994* Reported Cases

DISEASE	1993	1994	% change from 1993
AIDS	1738	848	-51%**
Chlamydia	4024	3915	-3%
Gonorrhea	1344	1428	+6%
Syphilis	261	141	-46%
TB	120	93	-23%
Animal Rabies	237	360	+52%
Campylobacter	698	755	+8%
E. coli 0157:H7	22	33	+50%
Hepatitis A	137	69	-50%
Hepatitis B (acute)	100	136	+36%
Lyme Disease	30	54	+80%
Measles	16	8	-50%
Pertussis	175	100	-43%
Rubella	0	122	NA
Salmonellosis	737	675	-8%

*First 6 months of the year. **Influenced by change in CDC definition in 1993.

New Massachusetts reporting regulations

Effective July 29, 1994, cryptosporidiosis and *E. coli* 0157:H7 infection are reportable to local boards of health. The initiation of rabies post-exposure prophylaxis is reportable to the Massachusetts Department of Public Health. Tuberculosis is also now reportable directly to the Massachusetts Department of Public Health (see "New TB reporting regs" on page 6 for details).

Contact your local board of health or the Massachusetts Department of Public Health for more information.

SUBSCRIPTION INFORMATION

To receive your *free* subscription to Communicable Disease *Update*, call (617) 522-3700, ext. 420 or write to Communicable Disease *Update*, SLI, 5th Floor, 305 South Street, Boston, MA 02130.

Please send comments and suggestions to the above-listed address.

Communicable Disease *Update*
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Boston, MA 02130

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You Be The Epi

A local physician calls concerning a patient who has been scratched by her pet cat. The cat was a neighborhood stray that the woman has fed for the last six months. Three weeks ago the woman took the cat into her home as her pet. This morning, when the woman picked up the cat, the cat scratched her deeply on the forearm. The cat appears healthy, has a normal appetite, and has no record of a rabies vaccination. The physician is seeking advice concerning rabies prophylaxis for the patient. You be the epi.

Analysis

Stray or unvaccinated cats are of great concern in the spread of rabies to humans. Bites and scratches from cats with unknown vaccination histories should be evaluated seriously. Even though the cat appears healthy, it may be incubating rabies and a ten-day quarantine is necessary to evaluate the health of the animal. Dogs and cats shed the rabies virus in their saliva and are contagious for five to seven days prior to onset of signs and symptoms of rabies. If the cat remains healthy for the ten-day period, one can be assured that the cat was not contagious when it scratched the woman. If the animal becomes ill, loses its appetite, exhibits a change in behavior, or develops any signs suggestive of rabies during the ten-day period, it should be euthanized and tested for rabies. If the animal is not available to be quarantined for ten days, the patient should begin rabies prophylaxis immediately.

Since this cat is available for the ten-day quarantine, the patient's need for a tetanus-diphtheria booster should be evaluated and the wound carefully cleaned. If the cat remains healthy for the ten-day period, no rabies prophylaxis is necessary for the owner, and the cat should receive a rabies vaccination. If the cat becomes ill during the ten-day period, the cat should be tested and prophylaxis considered pending the results of the rabies test.

For more information about cats and rabies, see Cats and Rabies on page 1.

MASS. HS 30.1703: 3/1

For Healthier Lives

Massachusetts Department of Public Health

Communicable Disease *Update*

Newsletter of the Bureau of Communicable Disease Control

Volume 3 Issue 1 January 1995

GOVERNMENT DOCUMENTS COLLECTION
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Prevention Centers and MDPH partnership formed

The Massachusetts Immunization Program (MIP) and the Division of TB Control are joining forces with the Massachusetts Prevention Centers (MPC) to increase community awareness about important health issues. The MPC system provides primary prevention services to enhance community capacity to address public health issues through organization building, public information, multimedia libraries and training.

The MIP, in conjunction with the MPCs, will increase family and community awareness about the importance of immunization in protecting the health of children through the development and promotion of culturally competent prevention and education programs and materials.

The Bureau of Communicable Disease Control wishes you a very happy and healthy new year!

The Divisions of TB Control and STD Control will be collaborating with the Brockton Prevention Center to implement a pilot project to promote Tuberculosis (TB), Sexually Transmitted Diseases (STD), and HIV prevention and control efforts within a targeted population in the Brockton area. A goal of this project is to stimulate development of a system that promotes community awareness and understanding of the TB/STD/HIV connection and assists in facilitating access to health care for those at greatest risk. This project is intended to serve as a pilot for potential expansion to high-risk communities served by other Prevention Centers.

Fixed-dose combination TB chemotherapy - An idea whose time is overdue in Massachusetts

Although the practice of prescribing fixed-dose combination capsules or tablets for treatment of tuberculosis has been slow to catch on in the United States, it has become the standard of practice in other countries. The Division of TB Control, Massachusetts Department of Public Health, believes that **fixed-combination therapy should become the standard-of-care for all adult patients receiving self-administered TB treatment**.

See Fixed-dose combination therapy on page 7.

INSIDE *HIGHLIGHTS*

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STD Update Page 3
Regional News Page 4
Immunization Updates Pages 5 and 6
TB Update Page 7
You be the Epi! Page 8

New state-wide immunization tracking system under development

Despite the success of immunizations in preventing morbidity and mortality from vaccine-preventable diseases, there are still low rates of immunization among children in some areas of the state. Surveys show that providers often estimate immunization rates approaching 85 to 90% in their practices. However, actual record review reveals that the average percent of 2-year-olds who are up-to-date for their immunizations was only 61% in the 37 public and private practices assessed.

In an effort to assist providers in ensuring that children are up-to-date on their immunizations, the Massachusetts Department of Public Health (DPH) is developing the Massachusetts Immunization Information System (MIIS). The MIIS will be a statewide database containing immunization information on children throughout Massachusetts. This system will assist in reminding parents and providers when vaccinations are due, identify under-immunized children, determine immunization status of new patients and emergency room patients, and produce immunization reports required for camp, child care, and school entrance. With the MIIS, the Department will be able to identify and refer children who lack a primary care provider, identify subgroups who may need special assistance to increase immunization rates, and disseminate vaccine information, disease alerts, and general DPH information to providers in a timely manner.

Providers will be able to submit data, make queries, or request reports by means of computer links, FAX form methods, touch-tone telephone, and mailed forms and reports. They will be able to access the database for immunization information on patients.

A one-year pilot of the MIIS, utilizing 20 provider sites, will begin in 1995. Statewide implementation is expected to begin in late 1996 with all providers in the state expected to utilize the system by 1999. For more information contact Robert Rosofsky, MIIS Director, by phone (617) 522-3700, ext. 420; FAX (617) 522-8735; or email at roso100w@wonder.em.cdc.gov.

STD Update

Chlamydia screening of men points to benefits for women.
Hepatitis B vaccine for adolescents to begin January.

See page 3 for details.

New school and Head Start immunization regulations.
See page 5 for details.

Epidemiology *Update*

Infant botulism in Massachusetts

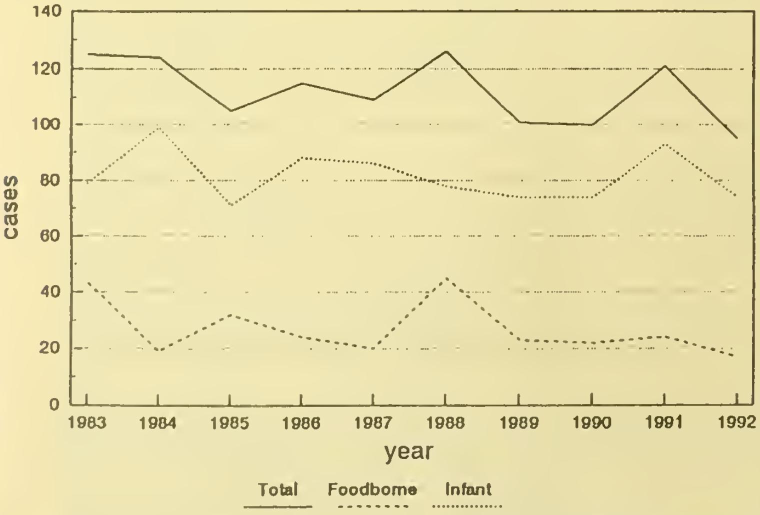
Two more cases of infant botulism have been confirmed in Massachusetts. Both cases occurred during October in 3-month-old infants, one visiting from out of state and the other a resident of western Massachusetts. A total of seven cases of infant botulism have been confirmed in Massachusetts in the last ten years. Although three of these occurred in 1994, they do not appear to be connected in any way.

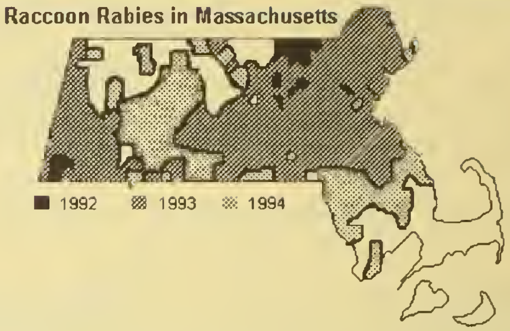
Unlike adult botulism, where pre-formed toxin is consumed, infant botulism occurs when infants less than one year of age ingest *Clostridium botulinum* spores. The spores then vegetate and produce toxin in the infant's intestinal tract. Spores are present everywhere in the soil and air and cases of botulism have been reported worldwide. In the United States, botulinum toxin type A is usually found west of the Mississippi and toxin type B is found in the east.

The first case of infant botulism in Massachusetts in 1994, reported earlier in the summer, was caused by toxin type A. This infant was a Massachusetts resident but had ingested honey that was packaged and distributed in the western United States. Toxin type A was produced from *Clostridium* found in that honey product. Toxin type A also caused the disease in the second case, an infant visiting from a western state. Investigation by the health department in his home state revealed soil disruption near his home. The third case, a western Massachusetts resident, was positive for toxin type B. No risk factors could be identified in this case. No honey or corn syrup ingestion was reported and exposure to disturbed soil was limited to open windows while travelling past construction sites on a car trip from Florida.

Infant botulism has been associated with the ingestion of corn syrup and honey and also with recent soil disruption (digging, excavating) in the area where the infant lives. While most cases of this illness are not preventable, health care providers in pediatric practices should advise that children under one year of age not be given honey or corn syrup or foods that contain them.

Botulism in the United States, 1983-1992





Rabies oral vaccine trial continues

Rabies has continued to spread throughout Massachusetts, with a total of 1402 animals in 272 towns testing positive for the raccoon strain of rabies since September of 1992. (Oops! The October issue of *CD Update* reported 123 total animals testing positive for rabies. The correct number was 1232.) Since October 1, 1994, seven new towns have documented rabid animals in their communities. Five of those seven towns were in the southeastern part of the state (see map).

Raccoon rabies is beginning to approach the vaccination zone involved in the Tufts University Veterinary School/ Department of Public Health (MDPH) oral rabies vaccine trial. The third phase of the oral vaccine trial began during the week of October 31, 1994, when the second baiting of 16,500 fishmeal baits containing oral vaccine was distributed 5 miles north and 5 miles south of the Cape Cod canal.

MDPH has entered into a 3-year cooperative agreement with the Centers for Disease Control and Prevention in Atlanta to conduct a public health cost/benefit analysis of the oral vaccine. The cost of rabies control measures will be studied in two areas of Massachusetts: along the North Shore and on Cape Cod. The comparison site on the North Shore was chosen for its similarities in geography and population to the vaccine trial site. The objectives of the study are to evaluate the cost of control measures in the two study areas, assess the social impact of the epizootic, and determine if an oral vaccine program is cost effective.

Caution urged in handling animals

The rabies virus may remain viable for longer periods of time in cold weather. If handling a dead animal that may have had rabies, protect yourself by using a shovel or other implement to pick up and move the carcass. If you must use your hands on the carcass, wear gloves!

The initiation of rabies post-exposure prophylaxis is reportable to MDPH.

Call (617) 522-3700, ext. 420 to request a report form.

Raccoon Rabies Update

Summary of confirmed rabies-positive animals since September, 1992

1155 raccoons	21 woodchucks	9 cows	
168 skunks	14 foxes	1 pig	1 beaver
30 cats	2 coyote	1 horse	

272 out of 351 towns and cities have reported confirmed rabid animals

STD *Update*

Annual conference held

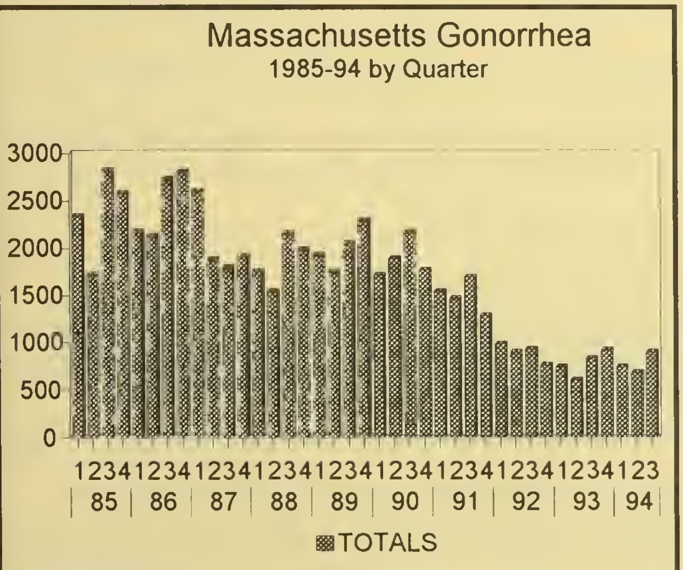
STD Update 1994: Current Problems and Future Directions was held on November 17, at the Colonial Hilton Hotel in Wakefield. The all day conference was sponsored by the Massachusetts Medical Society. This is an annual event of the Division of STD Control. The theme of this year's conference was special populations, including women, adolescents, and minority populations. These are populations at high risk for sexually transmitted disease. Following the welcome and introductions from STD Division staff, Dr. Karen Hacker, Director of Adolescent and School Services for the Department of Health and Hospitals gave a lively overview of the social, educational and health care needs of adolescents. This presentation was followed by a sensitive and thoughtful overview regarding the care needs of sexually active women, presented by Dr. Nina Carroll, Obstetrician and Gynecologist both in private practice as well as in several health centers and hospitals in the Boston area. Of particular interest were Dr. Carroll's recommendations for working with clients with special psychosocial needs, for example women who may have a history of incest or abuse.

Dr. Jack Moye from the National Institute of Child Health and Human Development, Center for Research for Mothers and Children at the National Institute of Health, was the keynote speaker. Following his presentation on Pregnancy and STDs/HIV, Dr. Moye joined other expert panelists in a discussion of HIV and pregnant women. Other experts included Dr. DeMaria, Director of the Bureau of Communicable Diseases, and Dr. Jo-Ann Harris, Director of the Pediatric Diagnostic Evaluation Unit, Boston City Hospital.

The afternoon workshops, which were well attended, focused in more depth on services to specific client populations. Presenters included: Maurice Melchiono, FNP, on adolescents; Jo-Anna Rorie, CNM, MSN, MPH, on minority issues, particularly those of African-American women; and, Cynthia Waldron, PA-C and Martha Kleinerman-Tabas, RNC on women.

Why do clients come to STD clinics?

The Division of STD Control is curious about why people use STD clinics as opposed to other medical services. What role do cost, convenience, insurance coverage and anonymity play in the decision to come to an STD clinic? How many people come because partners inform them of exposure to STDs? To this end, the Division is conducting a survey of clinic attendees during the month of December to learn more about the reasons for STD clinic use. Davis Mulligan, a senior at Stonehill College, is helping to design, conduct and analyze the findings.



Data Source CDC 73.688

Massachusetts has experienced a recent increase in gonorrhea cases which counters the trend of the previous ten years. Rates of gonorrhea have risen over the last six quarters (see above).

Hep B vaccine for adolescents to begin January 1995

Eight hundred doses of Hepatitis B vaccine will be made available for adolescents through STD clinics beginning in 1995. It is hoped that the available vaccine will address the vaccination needs of the sexually at risk adolescents seen in the clinic system. Hepatitis B is a preventable disease, for which all newborns are now receiving routine immunization. However, many adolescents who may be at a high risk through sexual exposure have not been vaccinated. The supply of this vaccine was made possible under the recently enacted Vaccines for Children Act.

Chlamydia screening of men points to benefits for female partners

The initial results of the chlamydia screening project for men attending STD clinics has yielded a 7% positivity rate. The goal of the project, which began this past September 6, is to collect data on the prevalence of chlamydia infection in men - both those who are symptomatic and those who are asymptomatic. Although those being screened are men, the study also seeks to establish the rate of infection which might be prevented among women who are unknowingly at risk for chlamydia infection from infected male partners. This allows the STD Division to offer these women early diagnosis, treatment and counseling for chlamydia as well as other sexually transmitted diseases. This is key to preventing subsequent pelvic inflamatory disease and infertility, which are complications of untreated chlamydial infections.

STDs go network !

Beginning this January, Lila Coverstone, Nurse Manager of the Cambridge STD Clinic, will be part of an ongoing health care series televised over Cambridge Access TV. STDs will be presented alternating with other health care related topics.

Regional Immunization *Update*

Region	Epidemiologist	Regional Nurses	Phone
Boston	Nancy Harrington		(617) 534-5609
Metro	Lisa Berger, M.P.H.	Jean Franzini, R.N. Peg O'Toole, R.N.	(607) 522-3700 ext. 420
Western	Marija Popstefanija M.P.H.	Judith Coates, R.N.	(413) 545-6600
Northeastern	Karen Ogden, R.N.	Bertha Hopper, R.N. Joan Daley, B.S.N., R.N.	(508) 851-7261
Southeast	Edward Pomfred, R.N.	Joan Thompson-Allen, R.N. Sonia Kobrin, R.N.	(508) 947-1231
Central	Jack Bicknell	Patricia Reynolds-Caouette, R.N.	(508) 792-7880

Epidemiology:

Outbreaks of pertussis have occurred in middle schools and high schools throughout the Boston and Metro area. Sixty-two laboratory-confirmed cases have been reported since November 1. Sporadic cases of pertussis have been seen throughout all the regions. Please continue to assess all cough illness, particularly in children over 11 years of age, as well as partially vaccinated or unimmunized children and all adults. Anyone experiencing a cough illness for greater than 2 weeks should be evaluated for pertussis. Persons coughing 2 weeks or less should have a nasal pharyngeal culture. Persons older than 11 years and coughing for greater than 2 weeks should have blood drawn for serology. All specimens should be sent to the State Lab Institute, 305 South Street, Boston, MA 01230: Attn: Pertussis Serology Lab.

Rubella continues to be of concern statewide with suspect cases under investigation throughout the state. The second case of congenital rubella syndrome (CRS) this year was confirmed, this one in an infant from Boston. A CRS Alert has been updated and sent to providers. Contact your regional epidemiologist to obtain a copy. For more information on CRS or suspect-CRS patient management, see "You Be The Epi" on page 8.

Vaccine Notes:

Flu: All regions are urging vaccine providers who have not submitted their influenza usage reports to do so immediately. Timely reporting of flu vaccine usage is important to ensure future availability of vaccine.

VFC: There has been some confusion about the Vaccines for Children (VFC) enrollment/profile forms. Although the program name implies the enrollment is limited to children, this is not the case. The enrollment/profile forms are also used for all providers who obtain vaccine from the Massachusetts Department of Public Health. Vaccine providers who have not completed and returned the VFC enrollment and profile forms should do so immediately. If you have questions or need more forms, please call your regional office. (See "Common questions about VFC" on page 6).

VIMs: New Vaccine Information Materials (VIMs, replacing vaccine consent forms), Vaccine Order Forms, and Vaccine Usage Forms are available through your regional office.

Vaccine Handling: With the arrival of winter, providers are reminded not to store vaccine coolers in car trunks after picking up vaccine from the depots. All vaccines except oral polio must be kept cold but not frozen. Freezing vaccines, other than oral polio, will decrease their efficacy. Keep oral polio vaccine frozen.

Educational Activities:

Regional staff are available to provide informational seminars free of charge for interested parties. Topics include: Standards for Pediatric Immunization Practices, Vaccines for Children, and Vaccine-Preventable Diseases (Pertussis, Rubella, CRS, Hepatitis B, and Measles). Nursing CEUs are also available. For more information, or to schedule a presentation in your facility, contact your regional epidemiologist.

Vaccine providers interested in assessing their practices' immunization rates are encouraged to contact their regional nurse to schedule an assessment.

The Northeast Regional Immunization Program, in collaboartion with the Massachusetts Chapter of the AAP, will address immunization issues at a Pediatric Grand Rounds on January 23, 1995 at Saints Memorial Medical Center in Lowell. An immunization update will also be presented at Pediatric Grand Rounds at Lowell General Hospital on February 16, 1995 at 8:00. For more information call the Northeast Regional Office at (508) 851-7261.

Personnel:

The Northeastern regions welcomes a new staff member. Joan Daley, B.S.N., R.N. joins the region as an immunization nurse. Welcome Joan!

Immunization *Updates*

New school immunization requirements

In order to better protect our children against vaccine preventable diseases, the Department of Public Health in collaboration with the Department of Education has updated immunization requirements for school entry (105 CMR 220.000). These new requirements incorporate the recommendations of the American Academy of Pediatrics (AAP) and the Advisory Committee on Immunization Practices (ACIP).

The shaded areas on the following tables represent changes in the school requirements. Please note the changes in requirements for measles, diphtheria, tetanus and polio vaccines, as well as those pertaining to preschool are effective in September of **1995**. The requirements for college remain the same, but the deadline for compliance has been increased to 30 days from 10 days. The addition of a hepatitis B vaccine requirement is *not* effective *until* September of **1996**.

All pediatric care providers should begin checking the immunization status of children in their practice now to ensure that their patients are vaccinated in accordance with these new requirements.

Requirements effective September 1995

	Day Care	**Preschool**	Kindergarten	Grades 7-12	College
Hepatitis B[1]	3 doses	**3 doses**	---	---	---
DTP/DT/Td	≥4 doses DTP	**≥4 doses DTP**	**5 doses DTP[2]**	≥4 doses DTP or ≥3 doses Td 1 Td booster in grades 10 - 12	1 Td booster within last 10 years
Polio	≥3 doses	**≥3 doses**	**4 doses[3]**	≥3 doses	---
Hib[4]	≥3 doses	**≥3 doses**	---	---	---
MMR	1 dose	**1 dose**	**2 doses measles** **1 dose mumps** **1 dose rubella**	2 doses measles[5] 1 dose mumps 1 dose rubella	2 doses measles 1 dose mumps 1 dose rubella

Footnotes

[1] Hepatitis B vaccine is required for all children born on or after January 1, 1992.

[2] Five doses unless 4th dose was given after 4th birthday, then only 4 doses.

[3] Four doses unless 3rd dose was given after 4th birthday, then only 3 doses.

[4] Doses 3 and 4 should be given according to manufacturer's guidelines.

[5] A second dose of measles vaccine will be required for entry into 7th grade until 2002.

Requirements effective September 1996

	Day Care	Preschool	Kindergarten	Grades 7-12	College
Hepatitis B[1]	3 doses	3 doses	**3 doses**	---	---
DTP/DT/Td	≥4 doses DTP	≥4 doses DTP	5 doses DTP[2]	≥4 doses DTP or ≥3 doses Td 1 Td booster given in grades 10 - 12	1 Td booster within last 10 years
Polio	≥3 doses	≥3 doses	4 doses[3]	≥3 doses	---
Hib[4]	≥3 doses	≥3 doses	---	---	---
MMR	1 dose	1 dose	2 doses measles 1 dose mumps 1 dose rubella	2 doses measles[5] 1 dose mumps 1 dose rubella	2 doses measles 1 dose mumps 1 dose rubella

Footnotes

[1] Hepatitis B vaccine is required for all children born on or after January 1, 1992.

[2] Five doses unless 4th dose was given after 4th birthday, then only 4 doses.

[3] Four doses unless 3rd dose was given after 4th birthday, then only 3 doses.

[4] Doses 3 and 4 should be given according to manufacturer's guidelines.

[5] A second dose of measles vaccine will be required for entry into 7th grade until 2002.

New immunization requirements for Head Start

The Massachusetts Immunization Program (MIP) has been notified of the recent changes in the Head Start immunization requirements (Head Start Act, 42 U.S.C 9831et seq.). The Head Start Act states that "all 4-6 year old children enrolled in Head Start must receive the second dose of measles vaccine before leaving the Head Start Program." **This requirement does not apply in Massachusetts until September 1995**. At that point, all children 4-6 years of age enrolled in Head Start must receive a second dose of measles vaccine.

In addition, the Head Start Act states that **effective fall 1994, hepatitis B immunization is required for all children who attend Head Start programs**. To date, in Massachusetts, only children born *after* January 1, 1992 have been eligible to receive vaccine supplied by the MIP. Now, children attending Head Start programs and born *before* January 1, 1992 must be immunized against hepatitis B. To help parents comply with the new Head Start requirement, **effective immediately the MIP will provide hepatitis B vaccine for children enrolled in Head Start.** For children enrolled in Head Start and born before January 1, 1992, Head Start must give the parent/guardian a letter to present to the child's health care provider. This letter authorizes the provider to administer MIP-supplied hepatitis B vaccine to these children.

If you have any questions, call your regional epidemiologist, or Ann Lenahan of Head Start at (617) 565-2479.

Immunization *Updates*

Common questions about the Vaccines for Children (VFC) Program

What is VFC going to do for me and my patients?

VFC has increased federal funding for immunizing children. Because of VFC, the Massachusetts Immunization Program (MIP) now has the resources to provide hepatitis B vaccine for high-risk adolescents through the Department of Youth Services and STD clinics. In future years we hope to expand hepatitis B immunization to one cohort of adolescents per year. Thanks to VFC funds, Massachusetts will also be able to distribute new vaccines when they become available.

How do I develop estimates for the practice profile?

Many practices have found that their billing data contain the patient's age and the insurance information needed to complete the practice profile form. Ethnicity is usually not included, so you will have to estimate how many of your patients are Native American (American Indian) or Alaskan Native.

I don't have a billing database. Can I leave my practice profile blank?

No, you must complete the profile. If you leave it blank, we will not be able to fill your vaccine orders. If you don't have a database, rely on your experience and the best information you have available, including what you know about the socioeconomic status of the families or the area you serve. We don't expect a high degree of accuracy in these estimates this year. You should be able to develop better estimates for the second year after screening patients for VFC eligibility in the first year.

If my estimates aren't accurate, will it affect how much vaccine I can order?

No, you can order vaccine as usual. If our records show that your orders and your patient estimates differ widely, we will contact you about updating your practice profile.

Do I have to screen all my patients for VFC eligibility?

Yes, you must screen all patients under 19 years old and keep the screening form in their medical record for 3 years. You do **not** have to rescreen patients each time they come in; once is enough, unless you know that their eligibility status has changed. You are **not** responsible for verifying the information.

Do I have to keep track of VFC vaccines separately?

No. You don't have to keep separate track of VFC vaccines. Just make sure you screen all patients under 19 for VFC eligibility, and keep track of all vaccine you get from the MIP. The Vaccine Usage Report (purple scanner form) has been simplified to make this easier. You now need to fill out only one line for each patient.

I don't see any children in my practice, so why should I enroll?

We have incorporated VFC into our existing state Immunization Program, so the Provider Enrollment Form actually replaces the previously used physician certification form. You must enroll if you want to get any vaccine provided by the MIP for any age group. Of course, if all of your patients are at least 19 years old, you won't have to screen them for VFC eligibility.

Save the date

A two and one-half day course entitled
Epidemiology and Prevention of Vaccine Preventable Diseases
will be presented by faculty from the
Centers for Disease Control and Prevention on
March 28, 29 and 30, 1995.
For more information call Chris Vernon
Massachusetts Nurses Association
(617) 821-4625, ext. 719.

Flu vaccine is still available !

Call (617) 522-3700, ext. 420 for information.

Payroll stuffers with reminders to immunize are available. If your organization is interested in promoting immunization among employees, call (617) 522-3700, ext. 420 for details.

Vaccine delayed is vaccine denied.

Make every visit count. Immunize!

Ad Council U.S. Department of Health and Human Services

TB *Update*

Fixed-dose combination therapy

cont. from page 1.

Rifamate, has been available for several years and combines isoniazid with rifampin. **Rifater**, similar in name, has recently been approved by the FDA and combines isoniazid, rifampin, and pyrazinamide. Rifater contains the three principle drug products that should be included in the initial phase of TB treatment. Rifamate contains the two principle drug products recommended for the maintenance phase of TB treatment.

Considerable confusion and misunderstanding exists among TB patients about which individual drugs to take and when to take them. Fixed drug combinations simplifies the treatment plan and may improve adherence. This is especially important since irregular self-administration of antituberculosis drugs creates an environment that selectively favors the survival of naturally occurring, random genetic mutations, resulting in acquired drug resistance.

There are certain circumstances however, where fixed-dose combination therapy cannot be used: 1) dosages are not designed for children, 2) dosages cannot be used for twice or thrice-weekly intermittent therapy, and 3) if adverse reactions occur, the patient will usually require individual drug therapy.

Note: Use extra care in identifying rifamycin containing products since different drugs have similar names (e.g., **rifa**mpin, **rifa**mate, **rifa**ter, and **rifa**butin). Dispensing errors have occurred and can be serious. For example, an INH hypersensitive person receives rifamate (containing INH) instead of rifampin.

The wider use of fixed-dose combination TB drugs should result in better treatment completion rates and less drug resistance.

Coming soon !

New procedures are being developed for evaluation of refugees and immigrants arriving in Massachusetts with abnormal chest X-rays taken overseas. For information call the Refugee Health Program, MDPH, (617) 522-3700, ext. 467.

Save the date

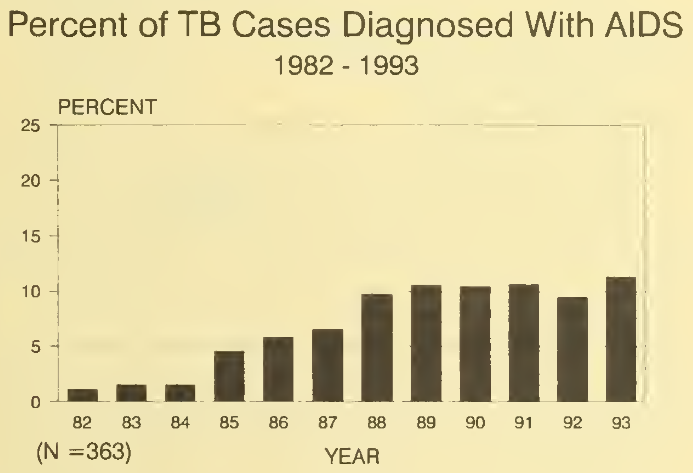
The day-long TB Update conference, cancelled in November, has been rescheduled for June 7,1994 at the Burlington Marriot. CEUs will be available for physicians, nurses, and respiratory therapists. Look for more information in the April issue of CD *Update*.

Boston welcomes new staff member !

A welcome is extended to Rita Nieves, R.N., M.P.H., who has joined the staff of the Boston Department of Health and Hospitals, Division of Public Health, in the leadership role of Tuberculosis Control Officer, and as a Principal Public Health Nurse for nurses working in tuberculosis control in the city. She most recently served as the Director of the TB Control Program for the Commonwealth of Puerto Rico. Rita can be reached at her office at the BCH TB Clinic (617) 534-4585 or at 1010 Massachusetts Avenue (617) 534-5395.

Revised AIDS case definition impacts TB/AIDS cases

There are a total of 363 persons who have been reported to have active TB and AIDS from 1982 through 1993. Prior to 1993 revised AIDS case definition, only persons with extrapulmonary TB and HIV infection met the criteria for an AIDS diagnosis (without other AIDS-defining criteria). This meant that persons with pulmonary TB and HIV infection, in the absence of other AIDS-defining illnesses, were not reportable with AIDS. Since pulmonary TB is often diagnosed relatively early in HIV disease progression, a lag time between TB diagnosis and AIDS diagnosis made it difficult to interpret trends over time. The new case definition eliminates this lag time in most persons, and it is expected that the TB/AIDS data will now more accurately reflect the true impact of HIV infection on the incidence of tuberculosis.



Using the revised AIDS case definition, approximately 10% of the TB cases also had AIDS from 1988 through 1993.

TB training a first for Massachusetts

The first "TB Today" course in Massachusetts was held from October 31 through November 3, 1994 at the Dominican Priory in Dover. The thirty-five participants, primarily nurses from local health departments, joined us for the four-day training. The program faculty was comprised of physicians, nurses, and program managers, as was well as a social worker, an outreach worker, and a patient. Responses and evaluations were very positive. The Division would like to thank all those involved in making the program a success, including the staff from the Boston TB Program, the State Refugee Health Program, the Shattuck TB Treatment Unit, the Priory, the South Carolina TB Program, and especially John Brickley, Executive Director of the American Lung Association of Massachusetts, without whose support we would have been unable to offer such an important learning experience. Plans are underway for the course to be offered again in the fall of 1995.

What's New?

Division of Epidemiology

Traveling overseas?

For up-to-date health advisories for international travel call the Centers for Disease Control and Prevention's FAX Information System at **(404) 332-4565** and request the international travel directory (document number 000005).
or
call the MDPH Travel Line **(617) 522-3700, ext. 302.** Leave your name, address, and countries of interest on the answering machine. Travel advisories will be mailed to you.

STD Control

New slide set available

Adolescents and STDs: produced by MDPH and the Massachusetts Infectious Diseases Society. The slides present information on sexual behavior and the epidemiology of STDs among adolescents. Printed materials are available to supplement the slides.
For details on these and other available materials, call Christie Burke at (617) 522-3700, ext. 400.

To receive your *free* subscription to Communicable Disease *Update*, call (617) 522-3700, ext. 420.

TB Control

TB information may be accessed through the Centers for Disease Control and Prevention's FAX Information Service. Callers may receive fact sheets on TB treatment, diagnosis, BCG, infection control, screening, and morbidity. To use the service call **(404) 332-4565** and follow the prompts. Request document number 000004.

To obtain copies of the *MMWR* "Guidelines for Preventing the Transmission of *M. tuberculosis* in Health-Care Facilities, 1994", call **(404) 639-1819** and follow the prompts.

Communicable Disease *Update*
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You Be The Epi

A 30-year-old woman (gravida 2, para 1, abortus 0) gave birth to a baby at 37 weeks gestation. The infant has cloudy corneas, hepatosplenomegaly, and a cardiac murmur. Echocardiography reveals patent ductus arteriosus and atrial septal defect. Further examination of the infant reveals periventricular calcification and metaphysial lucencies of the distal femurs. Review of the mother's chart indicates that rubella serology performed on day 36 of the pregnancy was negative for immunity to rubella. Her medical history reveals a viral illness at day 45 (low-grade fever, body and joint aches, and swollen glands behind the ears and at the base of the skull). No rash was noted. You suspect this baby may have congenital rubella syndrome (CRS). How do you proceed? You be the epi.

Analysis

Massachusetts experienced a rubella outbreak from December 1993 through June 1994 resulting in 132 reported cases of rubella. Subsequent cases of CRS were expected to appear beginning in August 1994. Two cases of CRS were reported during August and October, 1994.

Despite the fact that the mother had a previous child, she was found to be susceptible to rubella. She also describes a viral illness during her first trimester that is suggestive of rubella. **Remember, only half of people with rubella have a rash.** In addition, the infant's symptoms are compatible with CRS. Suspect cases of CRS require immediate response for infection control. The following guidelines will assist you in the management of infants suspected of having CRS.

(1) All suspect cases of CRS should be immediately placed on contact and respiratory isolation.

(2) Evaluate the immunity of all exposed staff, patients, family members and visitors. Immunize and exclude as necessary.

(3) Collect specimens including the following:
BABY: sera for IgM and IgG to rubella, a nasopharyngeal swab, and urine at birth for culture. In case of fetal demise, kidney, liver or brain tissue (kidney preferred).
MOTHER: sera for IgM and IgG to rubella

(4) Contact your regional epidemiologist immediately (see page 4).

(5) Finally, take this opportunity to review your hospital's policy on post-partum immunization of susceptible women and your hospital's policy on staff immunization.

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For Healthier Lives

Massachusetts Department of Public Health
Communicable Disease *Update*
Newsletter of the Bureau of Communicable Disease Control

Volume 3 Issue 2 April 1995

Infectious diseases: A continuing challenge

Early in 1994, a document entitled "Addressing Emerging Infectious Disease Threats, A Prevention Strategy for the United States"[1] was published and widely distributed by the Centers for Disease Control and Prevention (CDC). The purpose of this publication was to present a strategic plan to address the priorities set forth in the National Academy of Science's Institute of Medicine (IOM) report, "Emerging Infections, Microbial Threats to Health in the United States," published in 1992.

Despite numerous successes in the elimination and control of various infectious diseases, particularly through the use of vaccines, infections remain the leading cause of death worldwide. Whether they are diseases once thought conquered, such as cholera, tuberculosis or pertussis, or diseases caused by newly recognized pathogens, such as *E. coli* O157:H7 and *Cryptosporidium*, emerging infectious diseases pose a particular challenge to society. Our vulnerability was dramatically demonstrated in 1993 when *Cryptosporidium* caused the largest waterborne disease outbreak ever recognized in this country, with over 400,000 Milwaukee citizens affected. Also in 1993, *E. coli* O157:H7 caused a multi-state foodborne outbreak of severe bloody diarrhea and kidney failure in the Northwest. In 1991 an outbreak of *E. coli* 0157:H7 associated with drinking apple cider occurred in southeast Massachusetts.

CDC's plan includes several strategies necessary to effectively detect and prevent emerging infections. One critical goal is to improve infectious disease reporting. The feasibility of direct electronic laboratory reporting is being explored both in this state and across the country. Adding emerging pathogens to notifiable disease lists in a timely manner is essential. In August of 1994, *E. coli* O157:H7, hemolytic uremic syndrome and *Cryptosporidium* infection were made reportable in Massachusetts.

Other goals include the development of more effective control strategies and expansion of the public health infrastructures at all levels. Effective response to the threat of emerging infectious diseases, known or unknown, will depend on partnerships at the federal, state and local level. It is only with cooperation, interaction and coordination among a wide range of public and private organizations that we can achieve success in controlling new and old infectious diseases.

Examples of Emerging Infectious Diseases
United States, 1993

E. coli 0157:H7
Cryptosporidiosis
Multidrug-resistant pneumococcal disease
Hantavirus infections

GOVERNMENT DOCUMENTS COLLECTION
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[1] For a copy of this publication write to:

CDC/NCID
Office of Program Resources - EP
Mailstop C-14
600 Clifton Road
Atlanta, GA 30333

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Infectious diseases make best seller list

Two books highlighting newly discovered and re-emerging diseases and their potentially deadly consequences have recently been released.

Richard Preston's *The Hot Zone* begins by describing an actual case of Marburg virus infection in an expatriate Frenchman living in central Africa and proceeds to take the reader on an absorbing journey through the world of Marburg and Ebola viruses. Along the way, the reader is introduced to victims of Marburg and Ebola viruses in central Africa, including a ten-year-old Danish boy and a group of Belgian nuns, and the villagers for whom they provided care. The story then changes focus to describe an outbreak of Ebola virus in a Virginia research facility that housed monkeys from the Philippines. This strain of Ebola, while fatal in the monkeys, appeared to be innocuous to human caretakers. The author characterizes this episode as a "near miss." The book is written in much the style of a fictional thriller, although the story is true.

Laurie Garrett's *The Coming Plague, Newly Emerging Diseases in a World Out of Balance* is a more scholarly and comprehensive book. Garrett, an immunologist by training and a health and science writer for *Newsday* and *New York Newsday*, researched this book as a fellow at the Harvard School of Public Health. Her book introduces readers to such newly emerging infectious diseases as Bolivian Hemorrhagic Fever, Lassa Fever, Ebola virus infection, and Hantavirus Pulmonary Syndrome. She also revisits infectious diseases that came to the forefront in the late 1970's and early 1980's: Toxic Shock Syndrome, Legionnaire's Disease, and AIDS. In addition, she examines the problems of antibiotic resistant bacteria. Compared by some reviewers to Rachel Carlson's *The Silent Spring*, a wake-up call for pesticide control, *The Coming Plague* is a wake-up call for public health officials to be aware of these infectious diseases.

Epidemiology *Update*

Rabies oral vaccine: a brief history

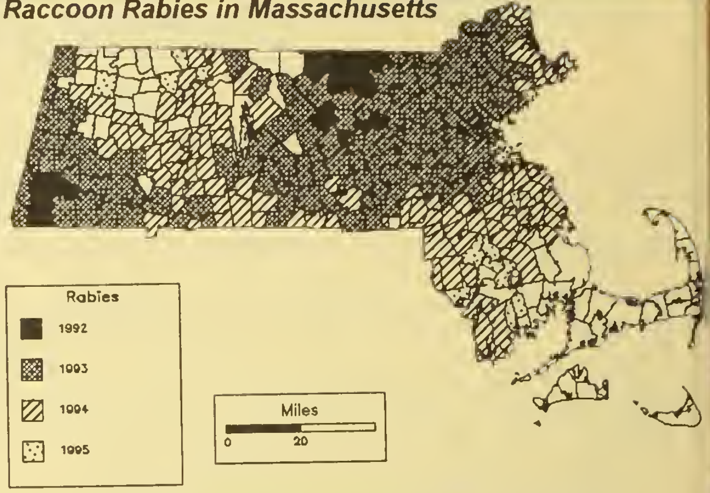
Wildlife rabies has perplexed public health officials and animal control officers for generations. Traditional methods of control involved poisoning, trapping, and killing host species. This proved to be an ineffective method of reducing rabies and thus efforts turned to the potential for vaccinating wildlife. Vaccination of dogs successfully controlled canine rabies in the United States during the 1940s and 1950s. The vaccination of wild animals is more difficult. Vaccination through trapping and release is cumbersome and inefficient so research turned to the potential for vaccinating wildlife through the administration of oral vaccine. Laboratory trials on oral vaccines (absorbed through the oral and buccal membranes) for foxes began in the United States in 1970.

The first field trial of oral vaccine for foxes began in the Rhone Valley in Switzerland in 1978. The vaccine was placed in chicken-head baits and baits were introduced into the environment. The vaccination of foxes was successful, the rabies outbreak did not cross the vaccination zone "barrier", and by 1988 most of Switzerland was virtually rabies free. Rabies in the countries surrounding Switzerland continue to challenge the vaccination barrier, and rabies in Switzerland did increase in the early 1990s. Currently, 14 European countries use oral vaccine to control fox rabies. The use of oral vaccines has proven effective, but requires continuous efforts and surveillance.

In North America, Canada began experimenting with aerial distribution of rabies vaccine baits in 1980. In 1986 a major field trial of aerial baiting was undertaken in Ontario and Pennsylvania. Baits were dropped from light aircraft at a density of 18 to120 baits per square kilometer. Foxes, coyotes, and raccoons were all found to accept the baits. In areas of low human population density, aerial baiting was found to be a less time-consuming method of vaccination than hand baiting.

The trial of raccoon oral rabies vaccine underway on Cape Cod continues. To date, the vaccination zone along the Cape Cod canal has not been breached (see rabies map). CD *Update* will keep you posted on the success of the trial as the epizootic continues to move southeast.

Raccoon Rabies in Massachusetts



April is rabies awareness month

April is Rabies Awareness Month in Massachusetts. Raccoon rabies has been found in 1574 animals in 286 of the 351 cities and towns in Massachusetts since the beginning of the epizootic in September of 1992. Over 1200 raccoons have tested positive for the disease, which has spilled over into 10 other species in our state alone. Rabies is not gone! The front of the epizootic has moved into the Northwest and Southeast regions of Massachusetts but is still present in the rest of the state. It remains important to vaccinate dogs and cats and avoid stray animals and wildlife.

Protect yourself, your family, and your pets by avoiding contact with wild or stray animals.

Raccoon Rabies Update

Summary of confirmed rabies-positive animals since September, 1992

1289 raccoons	21 woodchucks	9 cows	1 beaver
200 skunks	16 foxes	1 pig	1 fisher
32 cats	2 coyote	2 horses	

286 out of 351 towns and cities have reported confirmed rabid animals

Reptiles and Salmonellosis

Reptiles such as lizards, snakes and turtles have been implicated in the transmission of salmonellosis to pet handlers. Reptiles carry a wide variety of *Salmonella* serotypes, and fecal carriage rates may be as high as 84% to 94%. Some of the more unusual reptile-associated salmonella serotypes are: *S. marina, S. poano,* and *S. houten*. Salmonellosis related to reptiles has become a growing concern to public health officials in recent years because of the increased popularity in reptile pet ownership. According to the United States Fish and Wildlife Service, more than 13,500 savannah monitor lizards have been imported annually since 1990, and there has been a substantial increase in the number of imported iguanas (members of the lizard family) from 140,000 in 1989 to 800,000 in 1993. In addition, no quarantine or health inspections are required for entry into the United States.

Salmonellosis can be a life threatening disease in infants, young children, the immunocompromised and elderly patients. It has been shown that direct contact with one of these pets is not necessary for disease transmission to take place. The Centers for Disease Control and Prevention (CDC) has received reports of infants with *S. marina* whose only risk factor has been living in the same household as a pet iguana. Transmission most likely occurs through the infants' parents or caregivers who also care for the reptile. Strict hand washing after handling a reptile or its environment should decrease the likelihood of disease transmission. However, households with people at high risk for salmonella infection might want to reconsider their choice of pet. To increase the general population's awareness of this growing public health issue, the Division of Epidemiology is developing a health alert for reptile owners for distribution to local boards of health and health care providers. (Adapted from NY State Department of Health and Vermont Department of Health.)

STD *Update*

The female condom: An acceptable alternative? Study underway.

Personal protective barriers are important for protection against sexually transmitted diseases (STDs). Unfortunately, there is abundant evidence that many couples do not use condoms consistently, if at all. From the woman's perspective, it is important to note that use of the male condom depends upon the male's willingness to use it. Economic, social, and cultural forces often make it difficult for women to negotiate the use of condoms. These forces combine with biological factors of increased susceptibility to infection and increased likelihood of being asymptomatic to produce a disproportionate impact of STDs and their consequences for women. Thus, there has recently been an increased interest in female-controlled protective devices and measures.

The female condom is a polyurethane sheath. Flexible polyurethane rings are located at each end of the sheath: a loose, separate ring inside a closed end and another ring that forms the open end. The ring inside the closed end is used for insertion, covering the cervical area as would a diaphragm. It also acts as an anchor, positioning the condom well inside the vagina during intercourse. The outer ring remains outside the vagina. The condom is prelubricated with a silicone solution, with additional lubrication available in the package.

The STD Control Division, along with the University of Massachusetts School of Public Health and Baystate Medical Center, was awarded federal funds to evaluate the acceptance of the newly-licensed female condom. The project recently began in Springfield. Women attending either of two health centers are being asked to enroll. Focus groups will be held to explore the attitudes, beliefs and forces that frame sexual decision-making, including means of avoiding unprotected sex. After the first stage is completed, participants will be asked to use the female condom and report on its acceptability. Condoms and instruction on their use will be provided free of charge. Enrollment in the project began in January.

STD risk among older women

"Midlife and Older Women and HIV/AIDS", written by the Center for Women Policy Studies and edited/produced by the American Association of Retired Persons (AARP) has just been released. As the report notes, approximately 14% of women reported to the Centers for Disease Control and Prevention (CDC) with AIDS are over the age of 45.

The report notes that many postmenopausal midlife and older women may feel that the inability to get pregnant brings with it the freedom from concern about HIV transmission. Women with such beliefs may engage in unprotected sex. The report notes that older heterosexual couples rarely use condoms. Older women may face the same difficulties with unequal power, financial dependence and limited communication skills regarding sexuality that are faced by younger women. In addition, like women of all ages, older women may face risks from their partner's behaviors, over which they may have no control or knowledge.

At the CDC National STD/HIV Prevention Grantee's Conference in August, the STD Division presented a report on a cluster of STDs (primarily syphilis and HIV) found among older adults in the Springfield area. These cases have heightened staff awareness of STD risks among this population.

Over this last year we have begun collaborative efforts with the Department of Public Health's Elderly Health Program. Initial survey of Councils on Aging and the Home Care Corporations conducted by that program showed a need for education regarding STDs. We assisted the Elderly Health program in the development of a brochure on HIV and other STDs targeted to older adults. The brochure is expected to be released this coming year.

Preliminary analysis of male chlamydia screening in STD clinics underscores high risk for teens and men/women of color

Data from the first three months of the male chlamydia screening project indicate that the rates of infection were higher among Blacks and Latinos. Among 10-year age groupings, the highest rates were found among the youngest ages: 10 to 19 years. These results underscore the significant impact that notifying female partners of infected men may have on those women known to be at highest risk - women of color and teens. Since these partners may have no symptoms, they would often not be aware of infection with chlamydia until they developed a more serious condition such as pelvic inflammatory disease.

Lynn STD clinic moves to community health center

The Atlanticare STD clinic closed on February 12, 1995. Lynn Community Health Center at 269 Union Street Lynn now provides STD services in the Lynn area. The phone number (595-5463) will remain the same. The new clinic hours are listed below:

Monday	9-11/3-6	Walk In
Tuesday	9-2	Walk In
Thursday	3-6	Walk In

The new clinic services started on 2-13-95.

Regional Immunization *Update*

Region	Epidemiologist	Regional Nurses	Phone
Boston	Nancy Harrington		(617) 534-5609
Metro	Lisa Berger, M.P.H.	Jean Franzini, R.N. Peg O'Toole, R.N.	(607) 522-3700 ext. 432
Western	Marija Popstefanija M.P.H.	Judith Coates, R.N.	(413) 545-6600
Northeastern	Karen Ogden, R.N.	Bertha Hopper, R.N. Joan Daley, B.S.N., R.N.	(508) 851-7261
Southeast	Edward Pomfred, R.N.	Joan Thompson-Allen, R.N. Sonia Kobrin, R.N.	(508) 947-1231
Central	Jack Bicknell	Patricia Reynolds-Caouette, R.N.	(508) 792-7880

Epidemiology: Boston's confirmed cases as a sample of state-wide morbidity

Suspect and confirmed cases of vaccine-preventable diseases were on the increase in Massachusetts in 1994. Boston's suspect and confirmed cases are a sample of what the state experienced in 1994 (see page 8 for state-wide disease summary):

Disease	Suspect cases reported Boston, 1994	Confirmed cases Boston, 1994	Confirmed Cases Massachusetts, 1994
Rubella	>200	61	126
Congenital Rubella Syndrome	3	1	2
Measles	19	1	7
Invasive Haemophilus B influenza	1	1	3
Pertussis	>200	70*	533*

*Preliminary data. Reporting not complete.

There were no confirmed cases of tetanus, diphtheria or mumps in Boston residents.

Fifty-nine of the rubella cases occurred in unvaccinated adults, while the infant with Congenital Rubella Syndrome was born to a mother who had prior documented immunity to rubella. This infant later died as a result of complications from the disease. Although ten infants who were too young to have been fully vaccinated against pertussis developed the disease, the majority of pertussis cases occurred in middle-school and high-school age students who had documentation of having received four or five doses of DTP vaccine as young children. The infant with Hib had received one dose of Hib vaccine and was scheduled for the second dose at the time of disease onset. The infant reportedly has sustained permanent hearing loss. The measles case was in an unvaccinated 8-year-old tourist from France.

Providers are reminded to take every opportunity to vaccinate their patients and to promptly report suspect cases of vaccine-preventable diseases to the Regional Immunization Epidemiologist. Timely reporting will help to ensure that control measures are implemented quickly.

Vaccine Notes:

Warm weather is just around the corner! Vaccines will **NOT** be released without a cooler with ice packs to transport them. Please make sure your courier has a cooler and ice packs when picking up vaccine.

Educational Activities:

National Infant Immunization Week (April 22-28, 1995) marks a national initiative to increase providers' and parents' awareness about the importance of up-to-date immunizations. Take this opportunity to determine baseline immunization levels of the two-year old population in your practice! Call your Regional Immunization Nurse to schedule a a **Practice-Based Immunization Assessment**. The assessment is a powerful management tool to help you identify ways in which to increase immunization levels in your practice. Call today!

The Massachusetts Immunization Program has developed a new slide presentation covering **Adult Immunization** practices. Call your regional office for more information or to schedule a presentation.

Regional offices will be holding their **Immunization Roundtables** during the month of April. National Infant Immunization Week activities and the Prevention Center Partnership will be discussed. Call your regional office for more information.

Regional Immunization *Update*

National Infant Immunization Week
April 22-28, 1995

National Infant Immunization Week is a national initiative to promote the importance of immunizations. Please take the time to promote immunizations in your community. Payroll stuffers, public service announcements and print media kits promoting immunizations are available through your regional immunization office. For more information on how you can help or to obtain materials, contact your regional immunization office (see page 4 for phone numbers).

Pertussis outbreak strikes metro region

The epidemiology of pertussis has been changing over the years. In the past, pertussis occurred primarily in infants and young children. Now, most children who have received the diphtheria, tetanus, and pertussis (DTP) vaccine are protected. In contrast, most adolescents and adults are susceptible to pertussis because immunity from vaccine wanes and is frequently absent between 8 and 12 years after the last dose is given. Adolescents and adults serve as an important reservoir and source of infection for infants who suffer the most severe complications.

In late fall 1994, the Boston Metropolitan Region experienced an outbreak of pertussis that occurred mostly in middle school and high school students, particularly among sports teams. Of the 293 cases identified, 98 were diagnosed by single specimen serology (IgG to pertussis toxin 20 mg/ml), 36 were confirmed by culture, and 159 were epidemiologically linked to a laboratory confirmed case. Attack rates by grade in a given school ranged from 0.1% to 29.6%. One sports team had an attack rate of 37.0%. The communities that were affected the most by this outbreak were Weston with 102 cases, Watertown with 54 cases, Dedham with 29 cases, Norwood with 26 cases, and Milton with 19 cases.

Aggressive control measures included isolating cases during the infectious period, excluding symptomatic contacts from public activities until the completion of five days of appropriate antibiotics (either erythromycin or trimethoprim-sulfamethoxizole), widescale prophylaxis of close contacts, and intensive case identification and surveillance.

Pertussis will continue to be a problem in this age group until a vaccine for adolescents and adults is licensed. Recent studies have shown pertussis to be the etiologic agent in 20-25% of young adults with cough illness of 7-14 days duration. In order to prevent outbreaks, we suggest that providers consider pertussis when evaluating any cough illness greater than two weeks. Immediate treatment and prophylaxis with an appropriate antibiotic would be warranted in such cases.

Regional TB *Update*

Southeast News: Tuberculosis update — TSA Nurse: Anne Empey

Introductions: The S.E. Regional TB Control Office, also known as TSA 5, is staffed by Anne Empey, R.N., Public Health Nursing Advisor; Anne Bernard, clerk; and Cheryl Bernard, part-time case register surveyor. Community outreach is provided by two part-time outreach workers (ORW): Audrey Benson, who serves the northern area, including the city of Brockton; and Scott Cormier, who serves the New Bedford/Fall River area and surrounding communities, as well as the Cape. Additionally, Jose Martinez is an ORW assigned to the New Bedford STD clinic as part of a CDC funded TB/STD prevention project. For a complete listing of TSA nurses, see page 7.

Clinical services: Clinical services for southeastern Massachusetts are provided free in the following locations: Brockton Hospital; Morton Hospital, Taunton; St. Luke's Hospital, New Bedford; Sturdy Hospital, Attleboro; St. Anne's Hospital, Fall River; and the office of Dr. Chet Mohr in Hyannis. One of the highlights of the past year was the establishment of a Hyannis satellite clinic on Martha's Vineyard, with the Visiting Nursing Association doing monthly follow-up.

Education activities: We continue to stress preventive treatment and provide many educational inservices, particularly in long-term care facilities. Recently, a half day program entitled, "Regional TB Update, 1995" was held at Sturdy Hospital. This meeting provided the area Boards of Health, clinics, and other constituents with an insight into the newest treatment and infection control guidelines as well as a general update on the Division's activities. It also provided networking opportunities, a forum for a Q & A session, and continuing education units for nurses.

Immunization *Update*

Flu vaccination: A chance for immunization review

Every year the flu season is met with great anticipation. Will I get really sick with the flu? Do I really need a flu shot? This year the answers to these questions is YES. The flu season began in earnest in December, and has been experienced statewide, affecting all age groups. College students were especially hard hit this year. The State Laboratory Institute has identified types A/ Shangdong and B/Panama in isolates from throat cultures and serologies submitted for testing.

In October, all boards of health and councils on aging were notified to schedule their flu clinics. After reports of widespread flu outbreaks in the northeast, we suggested additional clinics be scheduled again in February. This year, as in the past, pneumococcal vaccine and tetanus/diphtheria toxoid were also suggested. Flu vaccine can be given throughout the season, which usually lasts well into March and sometimes April. It takes approximately two weeks to produce immunity.

It has been suggested by the Task Force on Adult Immunizations that the 50th birthday be used as a special date to review overall immunization status; to give a tetanus-diphtheria booster if indicated; to determine specifically whether the patient should receive a dose of pneumococcal vaccine; and to begin annual influenza immunization. Studies have shown that 30% to 40% of persons over 50 years old have high-risk conditions that define them as candidates for pneumococcal vaccine. The prevalence of these conditions is likely to be even higher among those regularly seeking medical care.

Thus, health care providers should be aggressive in identifying high-risk conditions in their patients and in immunizing appropriately. For healthy adults (those without risk factors), universal immunization with pneumococcal vaccine should be provided at 65 years. This is also an appropriate time to consider revaccinating those with high-risk conditions who received their first immunization more than six years earlier.[1] Therefore, it is suggested that all health care providers evaluate adult patient's vaccine histories and immunize when appropriate.

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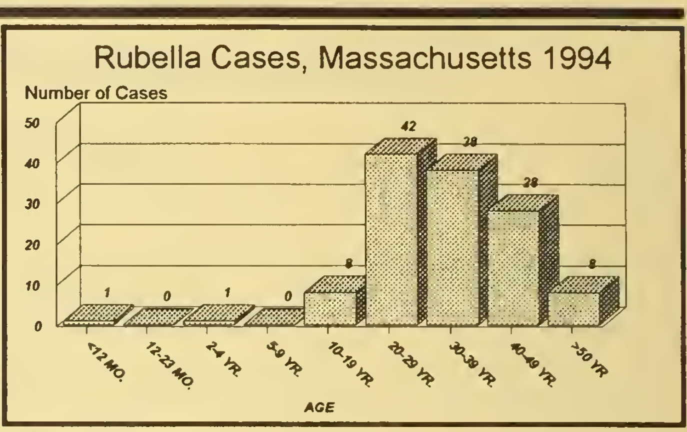
[1] *Guide for Adult Immunization*, Third Edition, American College of Physicians, Philadelphia, PA, 1994, pg. 112.

IMMUNIZATION EVALUATION AT AGE 50
A SYSTEMATIC APPROACH

EVALUATE ALL PATIENTS >50 FOR APPROPRIATE IMMUNIZATION WITH

- Td
- PNEUMOCOCCAL
- INFLUENZA

(Task Force for Adult Immunization - ACP)


Rubella Cases, Massachusetts 1994

Will we meet our 1996 disease-reduction goals?

As part of the national Childhood Immunization Initiative, the following diseases have been targeted by the Centers for Disease Control and Prevention for elimination of indigenous cases by 1996: measles, rubella, diphtheria, and poliomyelitis. Indigenous cases of tetanus in children under 15 years of age, and *Haemophilus influenzae* type b invasive disease (Hib) in children under five years of age are also targeted for elimination.

These disease reduction goals have been established as a measure of improvement in immunization levels. By 1996, 90% of children should be vaccinated with one dose of measles, mumps and rubella vaccine, three doses of oral polio vaccine, at least three doses of diphtheria, tetanus, and pertussis vaccine, and at least three doses of Hib vaccine by their second birthday.

One goal appears to have been achieved. It has been nearly four years since the last case of wild virus-caused poliomyelitis was reported in the western hemisphere. The World Health Organization has targeted worldwide eradication by the year 2000.

Dramatic declines in the incidence of vaccine-preventable diseases in the United States have correlated with immunization rates of over 95% in children attending school and day care. These rates of immunization in turn are attributed in part to the enactment and enforcement of immunization laws.

Many childhood vaccine-preventable diseases now occur in adults. Outbreaks of measles, mumps and rubella occur on college campuses, in prisons, health care facilities, and in the workplace. Of the 126 cases of rubella that occurred in Massachusetts in 1994, 92% occurred in individuals at least twenty years of age.

Unlike childhood immunization, adult immunization is not universal; specific vaccines are recommended for specific target groups. There are no statuatory requirements for adult immunization except for certain occupations in a few states. Recognizing the importance of adult immunization in the control of vaccine-preventable disease, the National Vaccine Advisory Committee in January 1994, established five goals, 18 recommendations for achieving these goals and 72 strategies for their implementation. However until these recommendations are implemented, it is unlikely that we will eliminate indigenous cases of measles or rubella.

TB *Update*

TB case management and the TSA nurse

In Massachusetts, local Board of Health nurses have mandated responsibility for TB case management. This includes an initial case investigation and monthly follow-up for all TB cases. The nurse's primary goal is to follow the case until the person has completed TB treatment. Outside of Boston, regionally based Massachusetts Division of TB Control nurses, referred to as Tuberculosis Surveillance Area (TSA) nurses, provide consultative services to the local Board of Health nurses for each patient. Persons with tuberculosis often experience many obstacles that may interfere with their ability to complete an adequate course of treatment. The case management system is designed to assist the patient in meeting diverse and complex needs. It is structured to give the patient the most flexibility possible in integrating TB care into daily life. In order to accomplish this, many tools are available. These include: assignment of Community Outreach Workers; the use of incentives and enablers; social service support; free TB treatment services through the TB Clinics statewide; the use of Directly Observed Therapy; in-patient care when indicated at the Shattuck Tuberculosis Treatment Unit (TTU); and, if all other non-restrictive measures have failed, involuntary (compulsory) hospitalization at the TTU.

The team responsible for each patient's care routinely review the individualized treatment plan with the patient to evaluate the patient's progress and to identify any further areas which may need to be addressed. This type of individualized TB case management has resulted in very high TB treatment completion rates in Massachusetts

The TSA nurses and their regions are listed below.

Tuberculosis Surveillance Area Nurses

TSA 1 - Carol Cahill - Central and Western MA
(413) 736-8939

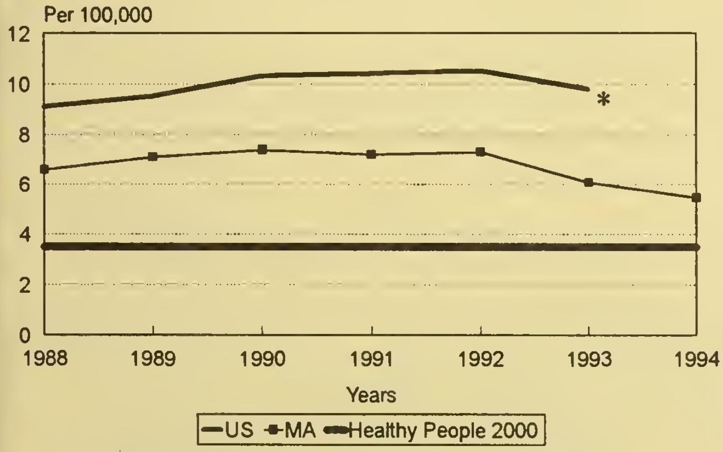
TSA 2 - JoAnn Keegan - Greater Metro Boston
(508) 851-7262, x48

TSA 3 - Nancy Taylor - Northeastern MA
(617) 851-7262, x50

TSA 4 - City of Boston Health Department
(617) 534-4585

TSA 5 - Anne Empey - Southeastern MA
(508) 947-1231

United States and Massachusetts case rates 1985-1994



*1994 U.S. data not yet available.

Although the above graph shows a significant decrease in TB morbidity in Massachusetts (25% between 1991 and 1994), the challenge of TB control remains. Note the following:

- There are approximately 250,000 persons in Massachusetts infected with *M. tuberculosis* who need evaluation and potential treatment.
- Currently, only 65% of the highest risk persons identified with TB infection (children under 15) complete TB preventive therapy.
- Fifteen percent of all culture-confirmed TB cases show resistance to at least one TB drug (20% of resistant cases are multidrug resistant).
- There were 32,000 patient visits to the TB clinics in fiscal year 1994. Clinic visits are going up at a rate of 2,000 to 3,000 per year.
- The cost of TB drugs has risen substantially for the past 2 years. There was a 173% increase in TB drug costs between fiscal year 1993 and fiscal year 1994.
- From 1990 to 1993, 109 TB patients were treated at Shattuck Hospital TTU. These patients are now primarily those with complex medical problems, such as drug resistance.

TRAINING ANNOUNCEMENT

Tuberculosis in a changing world

June 7, 1995, 8:30 am to 4:00 pm
Marriott Hotel Burlington, MA

This conference, designed for clinicians working in a variety of health care settings, will include TB epidemiology; diagnosis, management and treatment of disease; tuberculin skin testing and preventive therapy; reporting; infection control; current TB research; and the implications of a reformed health care system on TB control.
For more information, contact David DeBiasi at (617) 522-3700, ext. 450.

Communicable Disease *Updates*
1993 vs 1994 Reported Cases

DISEASE	1993	1994	% change from 1993	DISEASE	1993	1994	% change from 1993
AIDS*	1566	918**		Hepatitis A	213	111	-48%
Chlamydia	8330	8049	-3%	Hepatitis B (acute)	214	194**	
Gonorrhea	3009	3156	+5%	Lyme Disease	148	257**	
Early Syphilis	440	287	%	Measles	18	7	-61%
TB	336	329	-2%	Pertussis	408	533**	
Animal Rabies	720	734	+2%	Rubella	9	126	NA
Campylobacter	1793	1822	+2%	CRS***	0	2	NA
E. coli 0157:H7	107	133	+24%	Salmonellosis	2064	2017	-2%

*Diagnosed cases. Influenced by change in CDC definition in 1993.

**Preliminary data. Reporting not yet complete.

***Congenital rubella syndrome.

SAVE THE DATE

Immunizations: What's New?

A clinical update for nurses will be held in Boston on Tuesday, June 6, 1995.

Contact the Mass. Nurses Association at (617) 821-4625, ext. 719 for details.

Viral Hepatitis Conference

An update on viral hepatitis will be held on Wednesday, April 26, 1995 at the Burlington Marriot from 8:30 to 4:00.

The conference is free and lunch will be provided. CEUs and CMEs will be offered. Contact Barbara Martin at (617) 522-3700, ext. 420 for more information.

Communicable Disease *Update*
State Laboratory Institute
305 South St.
Boston, MA 02130

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You be the Epi!

A 34 year old male has recently been reported as a suspect case of tuberculosis with sputum smear positive for Acid Fast Bacilli. How would you conduct a contact investigation?

Analysis

First, identify contacts with the most exposure. Conduct a home visit to screen household members (he is married with children ages 4 and 6) with a PPD. Persons $\leq$ 4 years of age should have a chest X-ray, regardless of PPD result. Record all PPD results in millimeters; consider $\geq$ 5mm as positive.

Results: The wife's previous PPD for a pre-employment physical 8 months ago was 2mm and is now 12 mm (a converter); the 4 year old child is 0 mm and the 6 year old is 5 mm. All X-rays are negative.

Preventive isoniazid therapy should be offered to all three. Repeat the 4 year-old's PPD in 12 weeks; if still 0 mm, discontinue INH. Since there is evidence of transmission within the family, identify other contacts with extended exposure opportunities. In this case, he works alone as a courier, but rides to work with 12 others in a van. Offer PPD screening and clinic services to all van riders and drivers; repeat PPD in 12 weeks for persons with a negative PPD. Preventive therapy should be offered to all persons whose PPD $\geq$ 5mm at either interval.

ASS. HS30.1703: 3/3

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Massachusetts Department of Public Health

Communicable Disease *Update*

Newsletter of the Bureau of Communicable Disease Control

Volume 3 Issue 3 July 1995

Highest risk children are not fully protected against hepatitis B

To prevent perinatal hepatitis B infections, the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Pediatrics recommend that infants born to hepatitis B carriers receive HBIG and the appropriate dose of hepatitis B vaccine within 12 hours of birth. These infants should go on to complete the vaccine series at one and six months of age. **The third dose of hepatitis B vaccine should be administered along with DTP, polio, and Hib vaccines at six months of age.** It is imperative that these infants complete the hepatitis B vaccine series as soon as possible in order to fully protect them against infection from further exposures. Routine hepatitis B immunization during the newborn period is not sufficient for infants born to carrier mothers.

The Hepatitis B Prevention Project (HBPP) provides follow-up to infants born to hepatitis B carriers and their families to ensure that the infants receive appropriate treatment on time, and that other household and sexual contacts of hepatitis B carrier mothers are screened and, if susceptible, immunized. The Centers for Disease Control and Prevention (CDC) estimates that there are about 500 pregnant hepatitis B carriers annually in Massachusetts. In 1994, only 217 pregnant hepatitis B carriers were reported to the HBPP. In addition, 46 were identified through the Newborn Screening Program. The HBPP estimates that 250 infants born to hepatitis B carriers were not reported to the HBPP and may not have received the follow-up services they required.

Massachusetts Department of Public Health (MDPH) data indicate that 50% of infants born to reported hepatitis B carriers from 1991-1993 did not receive the third dose of hepatitis B vaccine on time, leaving them potentially susceptible to hepatitis B infection, chronic carriage, and serious sequelae later in life.

Age By Which Infants Born to Hepatitis B Carriers Received the 3rd Dose of Hepatitis B Vaccine N=595

Age	Cumulative Percent
7 mo	50
8 mo	63
9 mo	71
10 mo	78
11 mo	81
12 mo	83

Primary care providers, maternity hospital staff, and pediatric care providers can ensure that these infants and their household and sexual contacts receive follow-up by:

- Reporting hepatitis B carrier mothers to the local board of health.
- Recording hepatitis B vaccine doses in infants' medical records, discharge summary sheets, and personal medical records.
- Scheduling the second and third doses of hepatitis B vaccine at one and six months of age.
- Checking the vial of vaccine to determine the correct dose for these infants and being sure to administer HBIG.
- Following up with the families if a high-risk infant misses an appointment.

In addition, the American Academy of Pediatrics and the ACIP recommend that infants born to HBsAg-positive women be screened for hepatitis B surface antigen (HBsAg) and antibody to hepatitis B surface antigen (anti-HBs) at nine to twelve months of age. Infants receiving the third dose of hepatitis B vaccine late, after six months of age should be screened one to two months after the third dose, but no earlier than nine months of age. Infants who are anti-HBs-positive are considered adequately protected.

Please check your practice to ensure that these children get the full protection they deserve. If you have any questions, please call Louisa Paushter, MPH, Coordinator of the Hepatitis B Prevention Project at the Massachusetts Department of Public Health, at (617) 983-6800.

Diphtheria: A global concern

Since 1990 there has been a major resurgence of diphtheria in the Newly Independent States (NIS) of the former Soviet Union. While cases have been reported in all areas, the highest incidence rates are occurring in the Caucasian and Central Asian Republics. The World Health Organization considers the rapidly expanding diphtheria epidemic an international public health emergency. Over 47,000 cases and 1,700 deaths have been reported in the NIS. Over 20 cases linked to this outbreak have been reported in other European countries. Two cases of diphtheria in U.S. citizens (one visiting Moscow, the other working in Southern Ukraine) were recently reported. In the past decade, outbreaks have also been reported in Sweden and Ecuador

Since 1980, fewer than five cases of diphtheria per year have been reported in the U.S. Unfortunately, one case was reported in Massachusetts in 1994. While surveys show that >95% of

(see **Diphtheria, page 6**)

INSIDE *HIGHLIGHTS*

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Epidemiology *Update*

Cryptosporidiosis and water

Cryptosporidium is a protozoan parasite that was first recognized as a cause of human illness in 1976. It is found in the feces of infected humans, domestic animals (especially cattle) and wild animals. From these sources the parasite can then make its way into surface waters (e.g., lakes, rivers) and has recently caused several large waterborne disease outbreaks of gastrointestinal illness in other parts of the country. The most common symptom is watery diarrhea but weight loss, abdominal cramps, nausea, vomiting, headache and low-grade fever may also occur. Symptoms usually appear within 2 to 14 days after ingesting the parasite and last from 1 to 20 days in otherwise healthy individuals. In people with weakened immune systems, however, the symptoms can last longer and may be more severe, to the point of being life-threatening.

Since this infection can be passed from person to person and from animal to person, people can minimize their chances of acquiring and spreading infection by always washing their hands after using the toilet and changing diapers, and before handling food. They should also avoid drinking or eating unpasteurized dairy products or apple cider made from unwashed apples or drinking water from streams when hiking or camping.

Cryptosporidium is very resistant to disinfection and it would be very difficult for any public water supply to ensure that their water is completely free of this parasite. Negative test results cannot guarantee that no parasites are present and current testing methods cannot determine with certainty whether *Cryptosporidium* detected in drinking water is viable and capable of causing human infection.

Due to stringent watershed protection of surface waters and the low occurrence of this parasite in underground water, the likelihood that *Cryptosporidium* would be a problem in the regulated, Massachusetts public water currently appears low. However, severely immunocompromised persons face health risks from a variety of organisms, other than *Cryptosporidium*, that can be found in water. Therefore, those who wish to take extra measures to avoid infection can do the following:

- Bring tap water to a rolling boil for one minute before drinking it or making ice cubes with it
- Consider the use of a point-of-use filter using a very fine filter with an absolute pore size of 1 micron or smaller. Use the point-of-use filtering system according to manufacturer's instructions.
- Avoid practices that may involve direct contact with feces, e.g., diapering, toileting or exposure during sexual activity
- Ensure that any bottled water used has been processed in such a way that removes *Cryptosporidium* cysts (no bottled water is guaranteed to be free of *Cryptosporidium*)
- Avoid swallowing water when swimming

Cryptosporidiosis was added to the reportable disease list in 1994 and a Public Health Fact Sheet will be available soon. A current list of filters that meet the National Sanitation Foundation's criteria for the removal of cysts may be obtained from the NSF, 3475 Plymouth Road, P.O. Box 130140, Ann Arbor, Michigan 48113-0140.

Lyme disease vaccine trials

July--Vacationers and residents flock to the Cape and islands at this time of year, and literally into the waiting arms of deer ticks, which may carry Lyme disease (LD). In Massachusetts, the risk of contracting LD is moderate to high from April to October, but most cases are reported to the Department of Public Health (MDPH) in July. LD can cause serious problems if unnoticed or left untreated.

This year, two pharmaceutical companies are sponsoring trials of LD vaccines in several states, including Massachusetts. Ten thousand people from 10 states, including 900 Massachusetts volunteers, were accepted into one double-blind, randomized, placebo-controlled trial. Volunteers between 17 and 50 years of age, who are not pregnant, immune compromised, and who do not have active Lyme disease were eligible to be enrolled in this trial. Participants must also be in an endemic area for at least 30 days between May 1 and August 31. Enrollment in the trial is now closed.

This study involves three shots of vaccine over the course of a year and 5 blood samples over the course of 2 years. The vaccine is a genetically engineered purified outer surface protein A antigen (anti-OSPA) of *Borrelia burgdorferi*, the bacteria that cause LD. Natural infection with LD gives people low anti-OSPA titers. Animal trials have shown that high anti-OSPA titers are protective against LD; therefore, the vaccine seeks to raise people's titers and thus provide protection against infection or re-infection.

Until such time as an effective vaccine becomes available, the best means of protection against Lyme disease involves protecting yourself from the ticks that carry the bacteria. Don't walk barelegged in tall grass, woods, or dunes. If you do walk in these places wear light colored clothing that will contrast the tick, and a long sleeved shirt, long pants tucked into socks, and sneakers. Use insect repellents containing DEET on your skin and/or permethrin on clothing only.

The MDPH recommends that products with less than 10% DEET be used on children. Many experts feel that no more than 33% DEET should be used on adults. Wash skin carefully after coming home and do a "tick check." Ticks favorite places are on the legs, thighs, groin, armpits, along the hairline, and in or behind ears. The stage of the deer tick most likely to transmit the disease is about the size of a poppy seed, so keep your eyes open for new "freckles!"

The Division of Epidemiology and Immunization has new phone and FAX numbers as follows:

Phone: (617) 983-6800
FAX: (617) 983-6840

Raccoon Rabies Update

Summary of confirmed rabies-positive animals since September, 1992

1406 raccoons
223 skunks
36 cats
25 woodchucks
20 foxes
2 coyote
9 cows
1 pig
2 horses
1 beaver
1 fisher

298 out of 351 towns and cities have reported confirmed rabid animals

STD *Update*

MDPH Division of STD Prevention chosen as regional STD Prevention Center

The Division of STD Prevention has been chosen to be one of ten Regional STD/HIV Prevention Training Centers in the country. The mandate of the centers is to provide regionally based, accessible STD/HIV prevention training to clinicians, allied health personnel, and community based organizations.

While prevention centers in other parts of the country have been in existence for years, this is the first center of its kind in the New England region. Because of our status as a new center, the first year of operation will include in-depth needs assessments. The content as well as the method of training will, of course, reflect the results of the assessment; however, multiple modes of training are expected to be utilized. Instruction will include more traditional methods such as lectures, demonstrations, and clinical "hands on". In addition, the center will also use more "high tech" methods of instruction such as distance learning technologies involving computer-based learning and/or satellite transmission. We will be working closely with The Massachusetts Corporation for Educational Telecommunication (MCET). The MCET will provide technical assistance and training in distance learning technology to Regional and STD Division staff.

The Regional Center will provide at least 200 hours of training annually. As noted previously, course content will reflect the results of our needs assessments. If you have questions regarding the work of the Regional Center, you may contact the Director, Dr. Sylvie Ratelle at (617) 983-6948, or Christie Burke, Education Coordinator at (617) 983-6959.

Studies of polyurethane condom underway

One of the new areas of contraceptive technology discussed by the keynote speaker at the DPH-sponsored "Family Planning: More Than A Pill" conference was the recently marketed polyurethane condom. The new condom, called *Avanti,* was approved by the FDA and has been available in certain pharmacies and stores in 13 western states since last fall. For several months *Avanti* has also been available through condom stores on the east coast including stores in Florida, Atlanta and New York. However, studies of this type of condom continue to show a significantly higher breakage rate than traditional latex condoms. The June issue of *Contraceptive Technology* indicates that a variety of studies done by government agencies, as well as by the Los Angeles Regional Family Planning Council, show the polyurethane condom breaks at a higher rate than those made of latex. Nevertheless, prior to the development of the *Avanti*, no latex-free HIV-impermeable condoms were available to the five percent of the population that is estimated to be allergic to latex. Therefore, for those clients unable to use latex, the *Avanti* may offer an alternative form of protection. The results of current studies of the new condom will more clearly evaluate its effectiveness and determine whether it may remain on the market.

SAVE THE DATE

First Annual Six State Satellite Conference
of the
STD/HIV Prevention Training Center of
New England

1995 STD UPDATE:
THE VIRAL STDS
Thursday, November 16, 1995

Watch for more details in future issues
of
Communicable Disease *Update*

Report on women and sexually transmitted disease released

A two-part report on sexually transmitted disease in women was presented to the Public Health Council on April 25, 1995. The report includes a statistical and epidemiological section entitled *STD and Women: Trend Analysis 1985-1994*, as well as a literature review of the psycho-social issues surrounding this topic entitled *Women and STDs:The Social Context.* The trend report covers the trends in STDs overall and in specific diseases, as well as the role of the Division of STD Prevention in disease surveillance. The social context report covers a wide range of topics including the socialization of women, and specific issues of adolescents, incarcerated women, women who have sex with women, and women of varying ethnic groups. The social context report also includes information regarding contraceptive methods and protection against STDs and a broad outline of the work of the Division of STD Prevention. During its development phase, input regarding the content and wording of the report was received from a broad spectum of medical and social service providers, community-based agencies, women's groups as well as from individual women from the communities most affected by STDs.

The STD Division has new phone numbers as follows:

Main Office:	(617) 983-6940
Educational Information:	(617) 983-6959

To receive your *free* subscription to
Communicable Disease *Update*,
call (617) 983-6800.

Regional *Update:* Immunization

Region	Epidemiologist	Regional Nurses	Phone
Boston	Nancy Harrington		(617) 534-5609
Metro	Lisa Berger, M.P.H.	Jean Franzini, R.N. Peg O'Toole, R.N.	(617) 983-6860
Western	Marija Popstefanija, M.P.H.	Judith Coates, R.N.	(413) 545-6600
Northeastern	Karen Ogden, R.N.	Bertha Hopper, R.N. Joan Daley, B.S.N., R.N.	(508) 851-7261
Southeast	Edward Pomfred, R.N.	Joan Thompson-Allen, R.N. Sonia Kobrin, R.N.	(508) 947-1231
Central	Jack Bicknell	Patricia Reynolds-Caouette, R.N.	(508) 792-7880

Epidemiology: Changes in processing of clinical specimens for pertussis diagnosis

After October 1, 1995, the SLI will only process clinical specimens for pertussis diagnosis if they have been collected during the recommended time intervals. **The correct intervals for specimen collection are (1) cultures should be taken <14 days from cough onset and (2) serologic specimens should be taken $\geq$14 days from cough onset.** The lab **will NOT process** pertussis cultures taken >14 days from cough onset or serologic specimens taken <14 days from cough onset.

Morbidity from immunizable diseases has been low during the last quarter. Cases of pertussis continue to occur sporadically throughout the state, with the majority of cases seen in the Metro area. There have also been several investigations of rash illness throughout the state.

An outbreak of rubella among patients at a neighborhood health center in Boston raises the issue of the importance of an immunization policy for all employees of health care facilities. Providers are reminded that, according to the state's Isolation and Quarantine Regulations (105 CMR 300.000), health care workers who have no evidence of immunity to certain diseases and have an exposure, must be excluded from work for a specified period of time depending on the disease. Exclusion of staff can be very disruptive to the smooth operation of a facility. Avoid unnecessary disruptions in your facility by ensuring all health care workers have appropriate documentation of immunity to vaccine-preventable diseases.

Vaccine Notes: Don't miss out on free vaccines!

If you want to continue to get free vaccines provided by the Massachusetts Immunization Program (MIP) for your pediatric (and adult) patients, the deadline for enrolling in the program was Friday, June 30. If you have not submitted your enrollment forms, effective August 1, 1995, the MIP will **not** be able to fill your vaccine orders. If you have not submitted your enrollment forms and need another copy, call your regional immunization epidemiologist or Caryl Haddock, the MIP Enrollment Coordinator, at (617) 983-6811. Don't miss out! Your patients are counting on you to make sure they're immunized on time!

The newly approved chickenpox vaccine, *Varivax*, will be available through the MIP in 1996. The vaccine requires strict freezer requirements. Begin to prepare now! See "FDA licences varicella vaccine" on page 6 for more information.

It's not too early to be thinking about flu season and your vaccine needs for the coming Fall. Call your regional immunization office for more information.

A reminder that vaccine will not be released unless and cooler and ice packs are presented. Vaccines are only effective if they are handled, stored and administered properly. Your regional office has posters and magnets outlining the proper vaccine handling.

Educational Activities:

Regional offices will be holding immunization round tables in the Fall. If you have specific issues you would like addressed, contact your regional office.

In the Central region, Worcester County is implementing the Worcester County Immunization Project. Providers in Worcester County will be provided with direct assistance from an immunization advocate and a registered nurse to reconnect with their patients who are lost to immunization follow-up. For information, call DVNA in Fitchburg at (508) 348-1702 or WHHH at (508) 734-0052 and ask for the immunization program.

New telephone numbers for State Laboratory Institute

The phone numbers for the State Laboratory have changed.
The new phone numbers for the Bureau of Communicable Disease Control are as follows:

Division of Epidemiology and Immunization	(617) 983-6800
Division of Sexually Transmitted Diseases	(617) 983-6940
Division of Tuberculosis Control	(617) 983-6970
Refugee and Immigrant Health	(617) 983-6590
Massachusetts AIDS Surveillance Program	(617) 983-6560

Regional *Update:* Immunization

Vaccines in Action

Vaccine administration can be complicated and confusing. Individuals often seem have one or more contraindications to vaccination and are often behind or off schedule. In each issue of CD *Update* a different vaccine "problem" will be outlined and guidelines for vaccine administration will be detailed. If you have a specific question you would like addressed, send a postcard detailing the problem to: CD *Update*, State Laboratory Institute, Room 508, 305 South Street, Jamaica Plain, MA 02130. Your questions will be answered in future issues of the newsletter.

SCENARIO:
An 8-month-old boy is brought into your office. His immunization record indicates that at 2 months of age he received DTP1, OPV1, Hib1, and Hep B2. He is breastfeeding, looks well but is recovering from pharyngitis (still taking antibiotics), and a household member is pregnant.

What vaccines should you administer today?
DTP2, OPV2, Hib2, Hep B3

Are any of these contraindicated?
No. Although the child has been ill with pharyngitis and is taking antibiotics, he is healthy and can be vaccinated. Neither breastfeeding nor a pregnant household contact is a contraindication to vaccination.

When should you schedule his next appointment?
One month later (minimum interval between doses of Hib vaccine).

What vaccines should he receive at his next appointment?
DTP3 and Hib3. OPV3 is not administered at this visit because a minimum of six weeks is required between OPV2 and OPV3.

Adapted from: *Epidemiology and Prevention of Vaccine-Preventable Diseases,* Centers for Disease Control and Prevention, Atlanta, GA, January, 1995, Appendix F.

MIP recognizes providers who have achieved 1996 immunization goals

National Infant Immunization Week was April 22-19, 1995. The week emphasized the importance of infant immunizations and brought together efforts throughout the state. On April 24, an award ceremony was held at the State Laboratory Institute in Jamaica Plain for providers who have achieved 90% immunization rates among the 2-year-olds in their practices as measured through the use of practice-based immunization assessments. Dr. Susan Lett, Medical Director of the Immunization Program, recognized the essential role of providers in increasing the current 73% two-year age appropriate immunization levels in the state to the goal of 90% coverage by 1996. Dr. Lett commended the providers for their outstanding efforts in ensuring the health of our children and presented them with certificates of recognition. The following providers and their staffs were recognized:

Neil G. Bornstein, MD
Kenneth Colmer, MD
Katherine Eisenmenger, MD
Martin A. Gross, MD
John Kelley, MD
Anders Martenson, III, MD
Patricia Moffatt, MD
George F. Vitek, MD
Hilary Welland, MD

KEEP UP THE GOOD WORK!

To schedule a practice-based immunization assessment in your practice, contact your regional nurse (see page 4).

Regional *Update:* TB

Northeast News: Tuberculosis update

TSA Nurse: Nancy Taylor Flynn (508) 851 -7261

Introductions: The Northeast Regional, known as TSA 3, TB Control Office is staffed by Nancy Taylor Flynn, R.N., B.S.N., Public Health Nursing Advisor; Constance Parke, clerk, Mary Mahoney, clerk, and Ruth Pescatore and Linda Thistle the part-time case register surveyors. Community outreach is provided by two full-time bilingual outreach workers (ORW), Carmen Gorman, who primarily serves Lawrence, Lowell, and Methuen and Antonio Ramos, who provides service to the remaining TSA 3 area.

Epidemiology: In 1994, TSA 3 accounted for 70 cases of tuberculosis, 21% of the state's TB cases. TSA 3 is made up of CHNAs 10 - 14, and part of 16. Many of the cases in this region are among racial and ethnic minorities. This region has also seen an increase in the amount of drug resistance in the last few years.

Clinical Services: Clinical services for northeastern Massachusetts are provided free in the following locations: Atlanti Care Medical Center in Lynn, Lawrence General Hospital, Lawrence; Malden Hospital, Malden; Saints Memorial Hospital, Lowell; and Salem Hospital, Salem.

Educational Activities: Thirty-four educational inservices were provided in 1994, primarily in long-term care facilities. Recently, a half-day program entitled "Regional TB Update, 1995" was held at Saints Memorial Hospital in Lowell. This seminar provided the area's boards of health, clinics and others with an insight into the newest treatment and infection control guidelines and the Division's activities.

Immunization *Update*

FDA licenses varicella vaccine

The FDA has recently licensed the varicella vaccine produced and distributed by Merck under the trade name *Varivax*. The final national Advisory Committee on Immunization Practices (ACIP) recommendations for the use of varicella vaccine are expected later this year. The draft ACIP recommendations suggest varicella vaccine for persons in the following groups:

- All healthy children 12 - 18 months of age, ***regardless*** of prior history of chicken pox.
- Individuals ***without*** a reliable history of chicken pox in the following groups:
- Children 18 months to 12 years of age (under consideration)
- Adolescents and adults 13 years and older who are susceptible household contacts of immunocompromised individuals.
- Health care workers and others whose occupations place them in close proximity to persons at higher risk for complications
- Child care workers, teachers of young children and others whose occupation places them at high likelihood of exposure

The final ACIP recommendations will include other groups for which the varicella vaccine should be considered as well. Children 12 months to 12 years of age should receive a single dose; persons older than 13 years should receive two doses, four to eight weeks apart.

Since varicella vaccine is a live viral vaccine, it is contraindicated for persons who are immunocompromised. However, children and adolescents with acute lymphoblastic leukemia in remission can receive the vaccine under an investigational protocol by calling Merck at (215) 283-0897.

The possible effects of varicella vaccine on pregnancy are not known. If a woman inadvertently receives the vaccine while pregnant or within 3 months of becoming pregnant, she can be enrolled in a prospective study conducted by Merck by calling 1-800-986-8999.

Following the publication of the final ACIP recommendations and the establishment of a federal contract for the vaccine, which is not expected until 1996, the Massachusetts Immunization Program expects to provide varicella vaccine for at least one cohort of children, 12 - 18 months of age, per year. When it becomes available, varicella vaccine should be given simultaneously with all vaccines recommended for that age group.

The varicella vaccine is very labile and requires careful handling and storage. The manufacturer recommends that the vaccine be kept frozen in a **frost-free freezer** with an average temperature of **-15° C (+5° F)** or colder. **In preparation for receipt of varicella vaccine, providers are encouraged to assess their storage capacity for the vaccine.** If not already doing so, providers should keep a daily log of freezer temperatures in order to ensure that their freezers are adequate for storage of varicella vaccine. In addition, current guidance from the manufacturer states that the vaccine must be used within 30 minutes of reconstitution, or be discarded.

Questions about varicella vaccine may be directed to Merck at 1-800-982-7482, or the Massachusetts Immunization Program, (617) 983-6800.

Diphtheria: A global concern (cont.)

school-aged children here are appropriately immunized against diphtheria, serologic studies show that 20 to 60% of adults >20 years of age **LACK** immunity. Thus, there is enormous potential for the introduction and spread of diphtheria in this country.

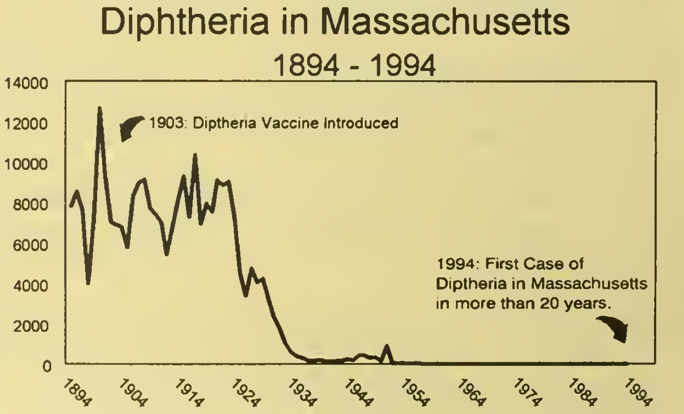
In order to protect the children and adults of Massachusetts against diphtheria, the MIP recommends the following:

1. Use of combination diphtheria, tetanus (DT or Td) toxoid for anyone ≥ 7 years of age. It is available free from the Massachusetts Immunization Program (MIP). Please contact your regional immunization epidemiologist.
2. Evaluate all adolescents and adults at every health encounter. Those without documentation of Td within the last ten years should receive a booster. The recommended schedule for those ≥ 7 years of age is outlined below.

ROUTINE DIPHTHERIA, TETANUS VACCINATION SCHEDULE FOR PERSONS ≥ 7 YEARS OF AGE

Dose	Age/Interval	Product
Primary 1	First dose	Td
Primary 2	4-8 weeks after first dose	Td
Primary 3	6-12 months after 2nd dose	Td
Booster	Every 10 years after last dose	Td

3. Proof of immunity is not required for international travel. However, the Advisory Committee on Immunization Practices recommends that travellers to areas where diphtheria is occurring should be up-to-date for diphtheria immunization, as outlined in the table above.
   Infants travelling to these areas should receive 3 doses of diphtheria, tetanus, pertussis (DTP) or DT vaccines before travel. The first dose should be given at 6 to 8 weeks of age and the next two doses after intervals of 4 to 8 weeks.
4. Foreign born individuals, particularly those from endemic areas, without documentation of immunization should receive a primary three dose series.
5. Continue timely immunization in children < 7 years of age. They should receive three doses of diphtheria-pertussis-tetanus (DTP) vaccine given at 2, 4, and 6 months of age, with a booster dose given at 12-15 months, and a second booster dose at 4-6 years.


Diphtheria in Massachusetts
1894 - 1994

MDPH Division of Epidemiology and Immunization (6/95)

TB *Update*

HIV-Related Tuberculosis Prevention (HRTP) Project in Massachusetts correctional facilities

Tuberculosis is recognized as a major health problem in U.S. correctional facilities with overall case rates reported to be three times greater than in the general population. Overcrowding, inadequate ventilation, and an overrepresentation of high-risk groups among the inmate population all contribute to higher case rates. HIV infection is possibly the greatest risk factor for progression from TB infection to disease. To that end, the Massachusetts Division of TB Control, with funding from the Centers for Disease Control and Prevention, has implemented an HIV- Related Tuberculosis Prevention (HRTP) project in three correctional facilities: MCI Framingham, MCI Concord and Suffolk County House of Correction. The goal of the HRTP project is to demonstrate the effectiveness of isoniazid (INH) therapy in preventing active TB among persons with a high prevalence of TB infection who are also at high risk for HIV infection. This project is focused on TB screening, timely evaluation, TB/HIV surveillance, education, compliance with TB preventive medications, and directly observed therapy (DOT). A bilingual (Spanish/English) outreach worker will be placed at each facility to work with correctional staff and inmates in meeting HRTP objectives. In the event of an inmate's release into the community before completion of INH therapy, the outreach worker will work with the inmate in the community to ensure compliance. The project is scheduled to begin at MCI Framingham on June 12, with start dates at Concord and Suffolk County soon to follow.

For more information, please call Trish Gedarovich, R.N., Prison Project Manager, or Marilyn DelValle, Prison Project Coordinator at (617) 983-6970.

Occupational Supplement Project underway in Massachusetts

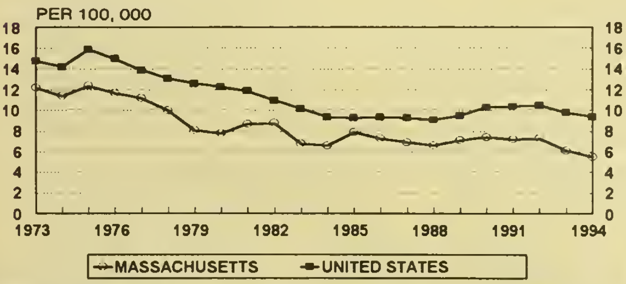
Massachusetts is one of several states participating in a Centers for Disease Control and Prevention (CDC) funded national study called the Occupational Supplement Project. This Project will try to determine the risk of acquiring tuberculosis (TB) associated with over 200 industries and 500 occupations and make recommendations to Congress on the most cost-effective methods of screening for TB. It is designed to collect information on the occupational exposures of working people (ages 16 through 64) diagnosed with active disease.

The Project is a collaborative effort involving federal, state and local government. At the federal level, CDC has developed a study protocol enlisting the aid of state and local public health personnel and has awarded grants to those able to participate. Assisting CDC with the Project are the U.S. Department of Labor (DOL) and the U.S. Bureau of the Census. DOL staff will interpret and code data about the patient's work history while Census staff will provide comparison statistics on people working in similar industries and occupations. State personnel with TB Control responsibility will coordinate the study, provide training, distribute forms, edit data and forward results to CDC. Locally, board of health nurses will be asked to perform case interviews, collect data and complete the Occupational Supplement questionnaires.

To date five regional workshops have been held with over 50 nurses from high-risk cities and towns trained in the details of the study. Supplies of forms have been distributed and interview fee reimbursement mechanisms established. Nurses working in non-high risk cities and towns will be trained as cases are reported.

The state Project Director is Joe Pike; he can be reached at (617) 983-6989.

UNITED STATES AND MASSACHUSETTS TUBERCULOSIS CASE RATES 1973 - 1994



Erratum

The April 1995 issue of CD *Update* reported the following information in the Communicable Diseases *Updates*:

Disease	1993	1994	% change from 1993
TB	336	329	-2%

The correct data are:

TB	**366**	**329**	**-10%**

Tuberculin Skin Test Project underway

The Tuberculin Skin Test Project will try to measure the risk for acquiring tuberculosis (TB) among health care workers (HCWs) exposed to TB patients in Massachusetts' TB clinics, the Lemuel Shattuck Hospital and the Tuberculosis Treatment Unit (TTU) at the Lemuel Shattuck Hospital. The Centers for Disease Control and Prevention recommends TB skin testing of HCWs at least annually and more frequently based on a risk assessment. The risk to HCWs who work in the TB clinics and other areas where there is frequent exposure to TB has not been quantified. The HCWs who have been defined as being at moderate risk will be skin tested every six months and those employees at high risk every three months. This Project will review data about skin test conversions among HCWs in the various settings and use the data to identify high-risk areas where interventions may be needed.

For additional information on the Tuberculin Skin Test Project, please contact Meg Harding, RN, Project Director at (617) 983-6981.

Reader's Corner

SILENT TRAVELERS: Germs, Genes, and the "Immigrant Menace"
by Alan M. Kraut
New York: BasicBooks, 1994

Public health practice is rooted in the last century and the early twentieth century. In the United States, these origins are coincident with mass migration from abroad. The thesis presented by the author of *Silent Travelers* is succinctly stated: "Throughout American history, immigration and public health have shaped each other's progress". Kraut's well-written, exceptionally readable book is a compendium of public health and public policy topics as related to immigrant communities. He deals with the politics of the miasma versus contagion debate, the foreigner as scapegoat, the evolution of quarantine as applied to immigrants to the U.S., sociomedical acculturation, the impact of cultural diversity and bias on health, and the implications of school-based public health interventions for immigrants. He presents a balanced view of both the positive and negative impact of well-meant public health efforts on immigrant communities. At a time when newcomers are once again increasingly pictured as representing a public health menace and there are calls to withhold health care from both illegal and legal immigrants, this book provides useful insight. Since much of the development of 19th century public health related to epidemic disease, there are particular lessons about official responses to emerging infections. The history of controversy surrounding public health interventions in schools during the first quarter of this century is especially relevant to today's debate. This is an informative and thought-provoking book by a professional historian. The historical lessons are of fundamental value to public health workers involved in many different efforts.

Communicable Disease *Update*
State Laboratory Institute
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Boston, MA 02130

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YOU BE THE EPI

A 78-year-old single man is seen for his annual physical at a neighborhood health center. He suffers from diabetes and hypertension. He gives a history of loss of appetite and gradual weight loss over a six-month period. He also describes having a rash on his hands six months ago. The rash was successfully treated with hydrocortisone cream. A syphilis test included with his physical reveals an RPR of 1:32 and a reactive MHa-TP. The patient has no previous history of a positive syphilis serology and the Disease Intervention Specialist for that area is notified. Based on the test results and physical exam the physician schedules a lumbar puncture and indicates she will treat the client for neurosyphilis and inform the DIS about the results of the treatment. What should the DIS do?

CASE ANALYSIS:

The DIS requests an interview with the client and reviews the signs and symptoms of syphilis. The client recognizes the rash he had on his hands and also remembers having a sore on the shaft of his penis around the same time. He states he did not tell his visiting nurse about the sore because he did not want to embarrass her and the sore went away. A record of the client's previous annual exam reveals a negative STS, **indicating an infection less than a year old**.

While reviewing his social and sexual history the client reveals that he pays a young woman to have sex with him about every two weeks. He thinks this woman is an injection drug user. He claims he did not use condoms because "they were for young guys." Several other men in his housing complex also have sex with the young woman on a regular basis. The DIS interviews several other men and refers them for care. But, the DIS is unable to locate the woman. HIV testing is recommended for the first client. The result is positive and the client is referred to an HIV clinic.

There are at least two important lessons in this case. First, do not make assumptions about the elderly and sexual activity. Second, a good sexual history is an integral part of the client's exam and without it information for diagnosis may be inadequate.

MASS. HS30.1703: 3/4

For Healthier Lives

Massachusetts Department of Public Health

Communicable Disease *Update*

Newsletter of the Bureau of Communicable Disease Control

Volume 3 Issue 4 October 1995

New health assessment services for refugees and immigrants in Massachusetts

The number of refugees worldwide is staggering -- over 16 million individuals have fled their home countries and are unable to return due to a well-founded fear of persecution. Approximately 110,000 refugees are resettled in the United States annually, with 3,000-4,000 coming to Massachusetts. In recent years, the largest groups of refugee arrivals to Massachusetts have been from the former Soviet Union, Vietnam, Somalia, Bosnia, Iraq and Haiti. It is anticipated that, following the recent agreement with Cuba, increased numbers of persons will arrive from that country.

Refugees have unique health needs which result from conditions in their native countries, their refugee experiences, and their journeys to the U.S. Their vastly different health care beliefs, and cultural and linguistic barriers impede access to information and services. Many refugees come from areas where disease control, diagnosis and treatment are lacking and health systems and surveillance are interrupted.

Prior to departure for the U.S., refugees complete a medical examination which includes evaluation for "communicable diseases of public health significance": infectious (smear positive) TB, HIV infection and sexually transmitted diseases.

It is recommended that all refugees complete a comprehensive health assessment as soon as possible after U.S. arrival. Whereas, the overseas examination is intended to identify medical conditions which will exclude an applicant from entering the U.S., the health assessment is designed to eliminate health-related barriers to successful resettlement. It also orients the refugee to the American health care system and initiates a relationship between the refugee and a health care provider. Finally, the results provide data necessary to plan, implement and evaluate health care services for refugees.

The Refugee and Immigrant Health Program (RIHP) received federal and state approval to develop a provider network for the delivery of health assessment services. Through the program, refugees arriving after August 1, 1995 are screened for communicable diseases and other health conditions within 90 days of their entry to the U.S. Currently, fourteen sites located throughout the state have been approved as health assessment providers. These providers operate under contract to DPH and have the capacity to perform comprehensive health assessments in a culturally competent manner, with appropriate bilingual staff. Refugees in need of follow-up for tuberculosis disease or infection receive additional support from bilingual, bicultural RIHP outreach educators who promote access to services and adherence with medical recommendations.

Providers interested in delivering health assessment services can receive additional information from the Refugee and Immigrant Health Program at (617) 983-6590. ■

Adolescent hepatitis B immunization is coming to Massachusetts

Beginning November 1, 1995, the Massachusetts Immunzation Program (MIP) will provide hepatitis B vaccine for all children entering seventh grade in September 1996. The MIP will provide hepatitis B vaccine to primary health care providers and interested school systems for immunization of sixth graders. An announcement of the program, outlining the details, will be mailed to providers. If you have questions, please call Gail Chaffee, RN at (617) 983-6800. ■

National Immunization Survey results released

According to data released by the Centers for Disease Control and Prevention (CDC) in Atlanta, 82% of Massachusetts' 2-year-olds are age-appropriately immunized compared to a national average of 75%. States' levels ranged from 61% to 88%. Among the cities surveyed, Boston leads the country with an 89% immunization level.

The data were collected by the CDC through a random telephone survey of households with children between the ages of 19 and 35 months. The data were adjusted to ensure that the results represent a fair estimation of the total population and were validated with a sample of medical records. This survey provides, for the first time, current estimates of vaccination coverage levels for 2-year-old children. The information from this survey will aid the state and nation in tracking progress toward the goal of 90% immunization levels for two-year-olds by the year 2000. ■

Massachusetts Immunization Levels
National Immunization Survey, April - December 1994

Vaccines	Immunization Level (%, 95% CI)
4 DTP, 3 Polio, 1 MMR	82 ±5.3
3+ Hib	91 ±3.5
3+ Hepatitis B	54 ±6.6

INSIDE *HIGHLIGHTS*

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You be the Epi!: Hep. A vaccine Page 8

Epidemiology *Update*

Re-emergence of Ebola virus in 1995: Will the recent outbreak in Zaire finally lead to the identification of a filovirus reservoir?

On January 6, 1995, a charcoal maker who worked in the jungle outside of Kikwit, Zaire became ill. The worker died one week later. He is believed to be the index case of a 1995 re-emergence of the Ebola hemorrhagic fever (EHF) virus. Retrospective EHF case surveillance reported by the World Health Organization (WHO) identified 315 cases with 244 (77%) deaths. The Kikwit outbreak has been declared over by WHO now that twice the maximum incubation period (42 days) has elapsed since the last known EHF case.

This year's EHF outbreak in Zaire marks the tenth time since 1967 that either Marburg or Ebola, viruses of the family Filoviridae, have emerged and caused documented clinical illness in humans. The severe hemorrhagic fever caused by filoviruses has made urgent the study of the natural history of these viruses. Despite large and lethal outbreaks since 1967, investigation has failed to identify the natural reservoir of filoviruses.

Marburg virus was first recognized in 1967 when laboratory personnel developed hemorrhagic fever following close contact with infected monkeys imported from Uganda. Ebola virus outbreaks were identified in 1976 in both Zaire and Sudan. To date, four Ebola subtypes have been characterized. The recently described (1995) "Cote d'Ivoire" subtype was contracted by a scientist who autopsied one of a number of wild chimpanzees which had died of an unexplained hemorrhagic illness.

While it is now evident that human contact with infectious tissues from non-human primates has resulted in filovirus infection, non-human primates are not widely thought to be natural reservoirs of the virus, due to their own fatal susceptibility. Bats and rodents have been long-suspected as reservoirs. It was noted that EHF cases in two separate outbreaks in Sudan had worked in the same bat-infested cotton factory. In the 1980s, two travelers who visited Kitum Cave in Kenya, known to have a large bat population, were diagnosed with Marburg virus infection. The charcoal maker from Kikwit also worked in an area occupied by numerous bats and rodents. While flying squirrels and bats from Cameroon have been reported to be serologically positive for Ebola virus, filoviruses have only been isolated from humans and other primates.

WHO reports that thousands of birds, mammals, arthropods, and other animals have been captured in the Kikwit area. While extensive collection and testing of animal and arthropod species was undertaken following earlier EHF outbreaks, technologies of the day may not have permitted filovirus detection. Recent diagnostic advances, including PCR, are enabling researchers to detect minute numbers of etiologic agents. Such techniques proved useful during the 1993 Hantavirus pulmonary syndrome outbreak in the southwestern U.S., where the "Sin Nòmbre" virus and its deer mouse reservoir were quickly identified. Will modern techniques, applied in the 1995 Zaire field investigation, help to elucidate the natural reservoir(s) of the Filoviridae, or will a 28-year-old mystery continue? ■

Human rabies cases in the US, 1994/1995

In 1994 there were six confirmed cases of rabies in the United States.

♦ In January 1994, a 44-year-old California man died of encephalitis. Rabies was neither clinically suspected nor confirmed until one month after his death. Antigenic typing revealed the bat strain of rabies. The patient had no known history of a bite or scratch. Rabies postexposure prophylaxis was administered to 25 health care workers.

♦ On June 21, 1994, a 40 year-old man died in a hospital in Miami following a subacute and progressive neurologic syndrome. Rabies was not clinically suspected and was diagnosed on brain examination in July 1994. The patient had no known history of an animal bite but visited Haiti frequently during 1979-1993. Testing revealed a rabies virus variant with 99% homology to a dog rabies strain known to occur in Haiti. Rabies postexposure prophylaxis was administered to 16 hospital personnel.

♦ On October 25, 1994, a 41-year-old West Virginia man died from rabies. Rabies was diagnosed three days before the patient died. Interviews with friends and family members revealed that two months before onset, the man had shot a bat, examined the head, and felt its teeth. Postexposure prophylaxis was administered to 48 persons.

♦ In October 1994, a 23-year-old female from Alabama sought care at the emergency room for subscapular pain, nausea, and vomiting. She was treated for musculoskeletal pain and released. Three days later she developed neurological symptoms and respiratory distress. Rabies was diagnosed two months postmortem. The patient had known exposure to bats. Rabies postexposure prophylaxis was administered to 99 persons.

♦ In November, a 42-year-old woman from Tennessee died of an illness characterized initially by flu-like symptoms. Rabies was diagnosed two days before the patient died. Characterization of the virus revealed bat strain. The patient had no known history of bat exposure. Forty-seven people received postexposure prophylaxis.

♦ In November 1994, a 14-year-old boy residing in Texas died following a progressive neurologic syndrome. Rabies was suspected five days before the patient died. The patient had no known rabies exposure. Testing revealed a rabies virus variant associated with Texas coyote/ border dog strain. Rabies postexposure prophylaxis was administered to 54 persons.

♦ During March of 1995, a 4-year-old girl in Washingon died of rabies. On February 18, 1995 a bat had been found in her bedroom. No evidence of a bite was found on the child and the bat was buried. On March 8 the child was hospitalized with listlessness, anorexia, sore throat, and pain on the left side of her neck. She died on March 15. The bat was exhumed and testing verified the bat and child to have the same strain of rabies. Rabies postexposure prophylaxis was administered to 72 persons.

The cases above underscore the importance of careful evaluation of all exposures to potentially rabid wildlife, especially bats. Bat rabies has been associated with 12 of the 25 cases of human rabies diagnosed in this country since 1980. A clear history of an animal bite exposure was documented in only six of these 25 cases. If a bat is physically present and the person(s) cannot exclude the possiblility of any contact with the bat, postexposure treatment should be considered unless prompt testing of the bat may be performed and this rules out rabies. ■

STD *Update*

UN conference on women: An international debate on women's rights

A new level of consensus has been reached by women at the international level on many of the social issues that affect women's risk of acquiring sexually transmitted diseases. These include violence, lack of sexual decision-making, economic discrimination, poor health care, and female genital mutilation. By the end of the conference, while many issues remained hotly debated, the debate had become much more specific. Resolutions were clear. Now, women from the US and the rest of the world will face the difficulty of actually implementing changes at home.

While women in this country do not face societal pressure for preferential abortion of female fetuses or the burning of brides with insufficient dowry, there are still social issues that put women at higher risk for STDs than men. Many women may not be able to prevent their risk of violent or non-consensual sex or may not be able to resist the economic or emotional pressures to have unsafe sex. The public health community must work on the international, national and local level to reduce that risk. ■

STDs: An international issue

Sexually transmitted diseases are a major cause of morbidity throughout the world. The prevalence of HIV infection in many cities in the developing world is staggering. Indeed, there are some cities in Africa and Asia where over 30% of people in their 20s may be infected. The impact on health and well being is incalculable. The economic impact will be profound as significant numbers of productive young adults have their lives cut short by disease. In addition, an increasing amount of already scarce resources will be expended for secondary and tertiary care. The extent of infection in each region of the world is difficult to estimate, as surveillance systems (and public health infrastructure in general) may not be capable of a systematic and thorough assessment. Given the synergy between HIV infection and other STDs, any place that does not have the resources for providing STD clinical and laboratory services, surveillance, disease intervention, and education, will likely have a higher incidence and prevalence of all STDs including HIV.

Syphilis remains a serious health problem in many parts of the world, affecting children born with congenital syphilis as well as adults with neurologic and cardiovascular syphylis. Gonorrhea and other genital infections result in extensive urologic complications. Another result of STDs is infertility. Chlamydia infections and gonorrhea are significant causes of infertility if not adequately treated. In areas of the world without adequate STD clinical and public health services, the prevalence of infertility is also high. ■

Need for multicultural STD services

Massachusetts has a diverse population. Newcomer groups from Asia, the Caribbean, South and Central America, and Eastern Europe have joined established ethnic communities. This has a distinct effect on prevention programming. Educational materials must be translated into a variety of languages. This may be particularly daunting if a language has no words in it for some of the STDs. Sensitive and confidential translator services are much needed at clinics. Different cultures approach health care in different ways. In some cultures, the entire family is involved in treatment decisions or activities regarding an ill family member. Treating just the sick person may be difficult. Undocumented immigrants may not come for medical care for fear of being discovered. Many newcomers arrive without much money or a command of the English language. They may also deal with all of the social forces that make life difficult for anyone of lower socioeconomic status.

What are we doing about these challenges? STD services are trying to build on the Cambridge Clinic's model of having formal contracts for outreach workers to enhance culturally appropriate STD education as well as to "de-mystify" clinic services. Each clinic is making an effort to ensure that appropriate translation services are available. The STD Division is in the process of translating all of its materials into Spanish, Portuguese, Haitian Creole, and Vietnamese. In addition, the staff of Disease Intervention Specialists is multicultural and multilingual. These efforts have not yet overcome the challenges posed by a cosmopolitan population, but they begin to address some of the barriers to prevention and care delivery. ■

Prevention Training Center prepares for first courses

The New England STD/HIV Prevention Training Center is preparing its first courses. A training course in STD Laboratory Methods will be held October 17-19. This will combine classroom lectures, bench work, and a clinical session. Edward Kennedy, a Laboratory Trainer from the Centers for Disease Control and Prevention (CDC) in Atlanta will join the faculty for this course. The second event will be held on November 16. This one-day STD Update will concentrate on viral STDs, with lectures on herpes simplex, hepatitis B, human papilloma virus (warts), and cytomegalovirus. Dr. Judith Wasserheit, Director of the Division of STD/HIV Prevention at the CDC, will deliver the keynote address. A lecture and panel discussion on HIV treatment modalities will follow. This conference will be held at the Colonial Hilton in Wakefield, and will be broadcast via satellite to sites throughout New England (Presque Isle and Augusta, ME; Burlington, VT; Durham, NH; Springfield, MA; Providence, RI; and Waterbury, CT). Each site will have one-way video and two-way audio, so attendees from each site can ask questions. Registration (including CMEs, CEUs, breakfast and lunch) will be on site. Registration forms were mailed in mid-September. If you would like a registration form, call the NE STD/HIV PTC at 617-983-6945. ■

Regional *Update:* Immunization

Region	Epidemiologist	Regional Nurses	Phone
Boston	Nancy Harrington	Mary Ellen Monahan, R.N.	(617) 534-2473
Metro	Lisa Berger, M.P.H.	Jean Franzini, R.N. Peg O'Toole, R.N.	(607) 983-6860
Western	Marija Popstefanija, M.P.H.	Judith Coates, R.N.	(413) 545-6600
Northeastern	Karen Ogden, R.N.	Bertha Hopper, R.N. Joan Daley, B.S.N., R.N.	(508) 851-7261
Southeast	Edward Pomfred, R.N.	Joan Thompson-Allen, R.N. Sonia Kobrin, R.N.	(508) 947-1231
Central	Jack Bicknell	Patricia Reynolds-Caouette, R.N.	(508) 792-7880

Epidemiology: Pertussis cases continue to occur -- changes in clinical specimens for diagnosis

- Pertussis cases continue throughout the state. An increase in cases during August may be linked to the outbreaks seen during the last school year. Pertussis should be suspected in any prolonged cough illness.
- **Reminder:** Beginning October 1, 1995, the State Laboratory will only process clinical specimens for pertussis diagnosis if they have been collected during the recommended time intervals. **For adults, the correct intervals for specimen collection are (1) cultures should be taken <14 days from cough onset and (2) serologic specimens should be taken ≥14 days from cough onset.** The lab **will NOT process** pertussis cultures taken from adults >14 days from cough onset or serologic specimens taken <14 days from cough onset. **For children less than 11 years of age, cultures are the only appropriate diagnostic test.** Cultures may be submitted in this age group any time during the course of illness.
- All confirmed and suspect cases of vaccine-preventable illness should be reported immediately to ensure that the appropriate control measures are implemented.

Vaccine Notes: Flu and pneumococcal vaccine distribution begins

- Flu and pneumococcal vaccine distribution started in mid September. The Commonwealth was able to obtain 550,000 doses of flu vaccine and 150,000 doses of pneumococcal vaccine.
- The optimal time to hold flu clinics is from mid-October though mid-November. However, flu vaccine may be administered at **ANY** time during the flu season. It is never too late in the flu season to receive a flu vaccine.
- This is the first year that pneumococcal vaccine has been available through the Immunization Program. Pneumococcal vaccine can be administered throughout the year and will be distributed throughout the year. However, an influenza immunization clinic is a good setting to evaluate pneumococcal eligiblity. Flu and pneumococcal vaccines may be administered simultaneously.
- In order to better estimate the amount of vaccine to order for next year, the Immunization Program is urging Boards of Health to complete vaccine distribution logs and promptly return them to their regional epidemiologist.
- Flu clinics are also a good opportunity to assess overall adult immunization needs. Td boosters should be given every 10 years. (See "Flu season" on page 6.)

Educational Activities: Cambodian, Vietnamese and Chinese immunization materials available

- Now available: Immunization brochures and coloring books in Cambodian, Vietnamese and Chinese. Call your regional immunization office or local Prevention Center to obtain copies. Supplies are limited.
- The Massachusetts Immunization Program and the Massachusetts Nurses Association (MNA) will sponsor three regional immunization updates for nurses this fall. The one-half day seminars will be held in Lowell (Oct. 14), on Cape Cod (Dec. 5), and in Pittsfield (Nov. 16). Call the MNA at (617) 821-4625 ext. 719 for details.
- Immunization Program staff are available on an ongoing basis to provide in-service trainings on many aspects of vaccine-preventable disease: morbidity, vaccine handling and administration, standards of pediatric immunization practices, and adult immuniztions. Call your regional office today for more information.

Personnel: Welcome to new staff members

The Boston Region welcomes a new immunization nurse, Mary Ellen Monahan, R.N. The Metro Region also welcomes Jane Sittnick, R.N. as Practice-Based Immunization Assessments Specialist. If you would like to schedule a Practice-Based Immunization Assesssment for your practice, or would like more information about how an assessment can help your practice increase immunization rates, call your regional immunization nurse at the above-listed numbers.

Regional *Update:* Immunization

Western Massachusetts makes strides to increase immunization levels

During the first half of 1995, the western region of the state has made impressive strides in increasing immunization rates. Congratulations to the providers, parents, immunization staff, and all those involved in immunization projects. The results of your hard work are made obvious in the following data:

Series Complete* Immunization Levels at 2 Years of Age

	1993	1994	1995
State Immunization Level	69.3%	70.8%	73.4%
Western Region Level	65.3%	69.9%	76.3%

*DTP4, Polio3, MMR1

- Day Care Immunization Survey revealed 85% immunization levels for 1994/1995 school year (over 8% greater than state levels)
- Over 97% of vaccine providers are enrolled in the Massachusetts Immunization Program/Vaccines for Children Program
- 150,000 doses of vaccines were administered in the western region
- 98% influneza vaccine is accounted for compared to a state rate of 70%

Find out how you can help continue this upward trend by calling the Western Regional Immunization Office at (413) 545-6600 or your own regional office at the numbers listed on page 4. ■

Vaccines in action

Q: A male student needs to get an MMR to meet college immunization requirements. His wife is trying to get pregnant. Should he receive an MMR?

A: Pregnancy or impending pregnancy in the household is not a contraindication to MMR vaccination. MMR is a live attenuated vaccine, meaning that the viruses used to make the vaccine are alive, but have been modified in the laboratory so as not to cause illness. The immune response to a live attenuated virus is virtually identical to natural infection. Because MMR is a live viral vaccine, pregnant women should not receive MMR. Pregnancy should be avoided for three months following receipt of MMR. However, pregnancy in a household contact is **not** a contraindication to MMR vaccination. The man should receive MMR and a Td booster, if he has not received a Td during the last 10 years.

Reminder: Effective September 1995, proof of two doses of measles vaccine and one dose each of mumps and rubella vaccine (2 doses of MMR recommended), and a Td vaccine within the last 10 years, are required for full-time college students **regardless of birth date**. Students are allowed 30 days to produce proof of immunization.

If you have questions about vaccine administration, send them to: Vaccines in Action, Room 508, Immunization Program, 305 South Street, Boston, MA 02130. We'll try to answer your questions in future issues of CD *Update*. ■

Regional *Update:* TB

Metro Boston News: Tuberculosis update

TSA Nurse: JoAnn Keegan (508) 851- 7261

Introductions: The Metro Boston Region, also known as TSA 2, includes Suburban Boston west to Framingham, north to Wakefield and south to Dover. The Public Health Nursing Advisor is JoAnn Keegan R.N , M.S.N. The clerical staff includes Constance Parke and Mary Mahoney. The part-time case register surveyors are Ruth Pescatore and Linda Thistle. The office is located on the grounds of Tewksbury Hospital in the Regional Health Office. Community outreach is provided by two part-time outreach workers: Phyllis Enfanto and Jean Cenat.

Epidemiology: In 1994, in TSA 2, there were 58 cases of tuberculosis verified, 18% of the state's cases. In April of 1995 this TSA was expanded to include 22 additional communities, including Chelsea, Winthrop and Revere. Cities in TSA 2 with case rates higher than the state case rate include Cambridge, Chelsea, Framingham, Revere, Somerville and Waltham.

Clinical Services: Clinical services for TSA 2 are provided free in the following locations: Cambridge Hospital; Middlesex County Hospital, Waltham; Metro West Medical Center, Framingham campus; and St. Elizabeth's Hospital, Brighton Marine Health Center Site.

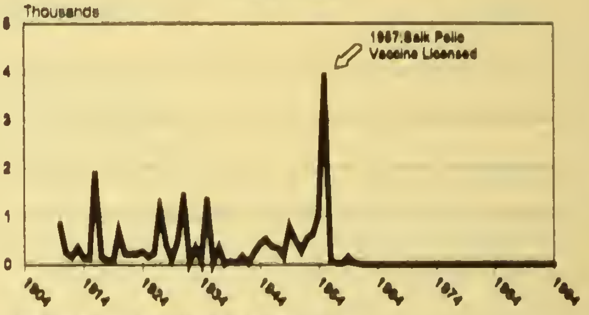
Educational Activities: In TSA 2, 14 educational in-service trainings were provided in 1994, primarily in long-term care facilities and home care agencies. ■

Immunization *Update*

Global progress toward polio eradication

Polio In Massachusetts

1910 - 1994



MDPH - Division of Epidemiology and Immunization (4/95)

In 1988, the World Health Organization (WHO) established the goal of global polio eradication by the year 2000. Progress toward this goal is summarized below. The report is based on data submitted to WHO as reported in *Morbidity and Mortality Weekly Reports* in April 1995 (44:14, pp. 273-275, 281).

Africa: Polio remains endemic in most countries of West and Central Africa. Twenty countries reported a total of 448 cases in 1994, a 98% decrease since 1988. The number of nations reporting no polio cases doubled, from 8 in 1988 to 16 in 1994. Most of these are island or southern African nations. Twelve countries had not yet reported to WHO when the *MMWR* article was written.

Americas: The last case of indigenous polio was reported in 1991.

Eastern Mediterranean: From 1988 through 1994, reported cases of polio dropped 58%, from 2,342 to 973. More than half of these cases were in Pakistan, where the number of cases declined 71% (from 1803 to 520) in a single year.

Europe: The number of reported polio cases in this region has remained stable throughout the 1990s. Ten eastern countries (Armenia, Azerbaijan, Bulgaria, Georgia, Kasakhstan, Kyrgyzstan, Tajikistan, Turkey, Turkmenistan, and Uzbekistan) accounted for 95% of the 211 cases reported for the region in 1994.

Southeast Asia: Reported cases of polio decreased 84% between 1988 and 1994. The 3,867 cases reported in India accounted for 93% of the regional total and 62% of the global total for 1994.

Western Pacific: From 1988 through 1994, the number of reported polio cases decreased 80%, from 2,126 to 425. In 1994, polio was reported in only 5 of the 35 nations in the region: Cambodia, People's Republic of China, the Lao People's Democratic Republic, Philippines, and Vietnam.

WHO has designated six geographic regions as areas where wild poliovirus either no longer exists or is at such a low level that it can be eradicated quickly: the Western Hemisphere, Western and Central Europe, North Africa, Southern and Eastern Africa, the Middle East, and the Western Pacific.

In fact, the Americas were certified polio-free in 1994. However, this does not mean that New World nations can begin cutting back their polio immunization campaigns. Polio remains endemic in many parts of the world and can easily be spread to polio-free regions through travel and emigration. ■

Flu season: a chance to evaluate adult immunization status

An Organized Approach to Adult Immunization

It has been suggested by the Task Force on Adult Immunizations that a person's 50th birthday be used as a special date to review overall immunization status; to give a Td booster, if indicated; to determine specifically whether the patient should receive a dose of pneumococcal vaccine; and to begin annual influenza immunization, if indicated. Studies have shown that 30-40% of persons over age 50 have high-risk conditions that define them as candidates for pneumococcal vaccine. Other surveys have shown that similar risk factors exist for influenza vaccine and that there is a demonstrated need for Td boosters at this age.

The Task Force also recommends a reevaluation at age 65 for another Td booster, annual influenza vaccine and revaccination with pneumococcal vaccine. Influenza, pneumococcal and Td vaccines can be safely administered simultaneously.

Influenza Vaccine

This year's formulation for the trivalent influenza vaccine will contain A/Texas/36/91-like (H1N1), A/Johannesburg/33/94-like (H3N2), and B/Harbin/07/94 -like. The Massachusetts Immunization Program (MIP) will be purchasing 550,000 doses of flu vaccine this year.

Pneumococcal Vaccine

The MIP will be providing 150,000 doses of pneumococcal vaccine to local boards of health for use in their clinics this fall. The Greater New Bedford Community Health Network Area conducted a pilot project last fall and offered both influenza and pneumococcal vaccines at the annual flu clinics in New Bedford. This project found that approximately 60% of the clinic participants received both vaccines. Based on this experience and reports that only 14% of adults at risk have received pneumococcal vaccine, the MIP decided to provide the vaccine this year.

The pneumococcal vaccine can be given year round; most people only need one dose of this vaccine in their lifetime. However, adults with certain chronic medical problems that require regular check-ups should be revaccinated if it is $\geq$ 6 years since their last dose.

Tetanus, Diphtheria Toxoid

Because of current outbreaks in other countries and reports that 20-60% of adults are susceptible to diphtheria, we recommend the administration of one dose of Tetanus-diphtheria (Td) toxoid to those adults who have not received a booster of Td within the past 10 years. ■

Tuberculosis in Massachusetts, the country and the world

Rene Dubos, the famous microbiologist and environmentalist, attributed tuberculosis as much to human social and economic conditions as to the tubercle bacilli he studied in the laboratory. The truth of his assertion is evident in Massachusetts and elsewhere in the country where tuberculosis is rare among persons in the highest socioeconomic groups and much more prevalent among the homeless, the elderly, the foreign born (especially recent immigrants from high prevalence countries), incarcerated persons, and others living in institutions where transmission is facilitated. In 1994, the TB case rate per hundred thousand Massachusetts residents was 5.47, the lowest rate ever recorded. However, this low rate reflects the influence of much lower rates in majority, white, U.S.- born Massachusetts residents, among whom TB has been almost eradicated, and much higher rates among various high-risk minority groups, such as the foreign-born. In 1994, 60% of the persons with new TB disease in Massachusetts were born outside the U.S., a proportion that has risen progressively in recent years. The following table of estimated case rates shows the widely diverse global tuberculosis problem.

According to the World Health Organization (WHO), 90 million new cases of TB will have occurred worldwide between 1990 and 1999, 95% in developing countries. Approximately one third, or 30 million people will die of their disease, with 98% of the deaths in developing countries, and 80% of these deaths in persons between the ages of 15 and 59 years, the most economically productive age group. Given these numbers, it is not surprising that TB is the world's leading single infectious cause of death. Even in sub-Saharan Africa, where HIV infection is prevalent, TB is the most common infection leading to death. Moreover, as the HIV epidemic moves into Asia, where the TB is well established, the combined effect is expected to be devastating.

Estimated TB cases per hundred thousand population

Massachusetts	<6
USA	<10
NYC (peak, 1992)	50
Global	75
SE Asia	115
Bombay, India	2000

More than 50 years after effective antituberculosis drugs became available, it is a tragedy that TB continues to be the major infectious threat to life worldwide. A 1993 analysis by the World Bank showed that TB control in developing countries is "among the most cost-effective of all interventions" because it prevents deaths among the most economically productive members of society. Although both the WHO and the World Bank have increased efforts at TB control worldwide, in 1990 TB in developing countries received only $16 million in external funding compared to $185 million for AIDS and sexually transmitted diseases, $77 million for leprosy, and $47 million for malaria. As causes of deaths for persons over age 5, however, the World Bank estimated that in 1993 TB killed 1.9 million, AIDS 200,000 , leprosy 2,000, and malaria 300,000.

In this era of global migration, it is clear that no country can be free of tuberculosis while epidemic TB continues unchecked in large parts of the world. More money for TB control in developing countries is needed, but money alone is not enough to solve the problem. Governmental commitment to effective TB control is essential in developing countries. This is also true in developed countries. In Massachusetts, sustained commitment to TB control will be needed for years to come as we continue to feel the effects of the TB storm raging around the world. ■

New project targets immigrants and refugees for early TB diagnosis and treatment

In September, 1994, the Refugee and Immigrant Health Program (RIHP), in collaboration with the Division of Tuberculosis Prevention and Control, initiated a project to improve and expedite the process by which all new arrivals to Massachusetts with Class A/B TB are evaluated. The Project is an opportunity to target intervention for early diagnosis of disease as well as prevention of future disease in a known high-risk group.

All immigrants/refugees applying for United States visas must undergo an evaluation for infectious tuberculosis prior to entering the country. Persons with abnormal chest x-rays consistent with TB are then classified as Class A, Class B1, or Class B2. Class A indicates active TB, on treatment, with history of positive smear; Class B1, active TB, smear negative, not on treatment; and, Class B2 refers to individuals with old, healed TB. USPHS Quarantine Stations at ports of entry notify states of Class A/B TB arrivals to their jurisdiction.

The initial phase of the project involved the development/ dissemination of evaluation protocols as well as establishment of effective communication. Systems were developed to immediately notify local health departments of high-risk arrivals to their communities; notify arrivals of the need for follow-up and link them with the appropriate resources; make bilingual/bicultural outreach support available; and, monitor clinical evaluations and adherence to any recommended therapy.

A review of the first 125 evaluations of Class A/B TB arrivals underscores the high risk for disease in this group -- seven (5.6% or 5,600 per 100,000) were confirmed cases of active TB and 34% of the total were placed on preventive therapy. The quality of the evaluations has improved, evaluations are being completed in a more timely manner, and immediate referrals are being made for Class A/B TB arrivals relocating to other states. Communications have been strengthened and all parties have an increased understanding of the overseas and domestic evaluations. ■

Communicable Disease *Updates*
January - June 1994 vs. January - June 1995: Reported Cases

DISEASE	1994	1995	% change from 1994
AIDS	546	*369	*-32.4%
Chlamydia	3906	4004	+2.5%
Gonorrhea	1426	1403	-1.6%
Early Syphilis	139	127	-8.6%
TB	92	113	+22.8%
Animal Rabies	360	295	-18.1%
Campylobacter	752	572	-23.9%
E. coli 0157:H7	29	31	+6.9%

DISEASE	1994	1995	% change from 1994
Hepatitis A	69	48	-30.4%
Hepatitis B (acute)	124	**39	-68.5%
Lyme Disease	48	44	-8.3%
Measles	7	2	-71.4%
Pertussis	101	155	+ 53.5%
Rubella	122	6	-95.1%
Salmonellosis	670	635	-5.2%

* Strongly influenced by reporting lag and the change in case definition in 1993. **Preliminary data.

International Travel Hotline

Looking for current information concerning international travel and health? The Center for Disease Control and Prevention's Travel hotline may be accessed by phone or the internet.

Phone: (404) 332-4559
World-Wide Web (WWW): http://www.cdc.gov

To receive your *free* subscription to Communicable Disease *Update*, call (617) 983-6800.

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Send to:

You be the epi!

You receive a call from a patient who is traveling to Thailand with her husband and one-year-old child. They will be leaving in 4 weeks and visiting relatives for 2 months. She and her family received immune globulin (IG) prior to previous trips to Thailand. Your patient is wondering about whether or not she and her family should receive the new hepatitis A vaccine. What is your advice?

Case Analysis:

The Advisory Committee on Immunization Practices has offered interim recommendations on the use of hepatitis A vaccine for international travelers:

All susceptible persons traveling to or working in countries with intermediate or high HAV endemicity (those countries other than Australia, Canada, Japan, New Zealand, Western Europe, Scandinavia) should be vaccinated with this vaccine or receive IG. The vaccine is preferred for persons who travel repeatedly to, or reside for long periods in, high-risk areas. IG is recommended for short-term, adult travelers or those less than 2 years of age.

Persons are considered to be protected by 4 weeks after receiving their initial dose of vaccine. For long-term protection, a second dose is needed at 6 to 12 months. For persons who will travel to high-risk areas less than 4 weeks after the initial vaccine dose, IG should be administered simultaneously with the first dose of vaccine at different injection sites.

Since this family often travels to a high-risk area and stays for long periods of time, the older two family members would be candidates for the vaccine. The infant (less than 2 years of age) would receive IG. They are not leaving for 4 weeks, thus allowing enough time for the vaccine to be effective. They will need to receive a second dose of vaccine 6 to 12 months after the initial dose.

MASS. HS 30.1753: 4/1 V

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Massachusetts Department of Public Health

Communicable Disease *Update*

Newsletter of the Bureau of Communicable Disease Control

Volume 4 Issue 1 February 1996

Bats, an important cause of human rabies

Bat strains of rabies virus are responsible for 14 diagnosed human rabies cases that have occurred in the U.S. since 1980. This represents over 50% of all U.S. human rabies cases for that time period. Of those 14 cases, **only 1** was clearly associated with a known bite.

The Massachusetts Department of Public Health (MDPH) has revised its recommendations regarding human exposures to bats. MDPH now recommends that in a situation in which a bat is physically present, unless contact with the bat can be completely ruled out, the bat should be captured and tested for rabies or the people involved should receive rabies postexposure prophylaxis. A typical scenario might involve a man who wakes up to find a bat in the bedroom. Because the man was asleep, he is unable to reliably determine if the bat had been in contact with him. The bat in this case should be tested for rabies. If the bat is unavailable for testing, the individual should receive rabies postexposure prophylaxis. The situation is even more difficult to evaluate if the individual is an unreliable reporter of his or her own exposure. For example,

(Continued on page 2, see "Bat rabies")

A TB divergence: increasing cost and declining cases

The tuberculosis case rate in 1994 was the lowest recorded. Despite a record low case rate in Massachusetts, the costs of TB control have risen. What is going on? Part of the cost increase is simply a steep rise in the prices of PPD skin test antigen and TB drugs. But skin testing and clinic visits are also up despite falling cases. Why are more people being tested for TB, and why are the TB clinics so busy?

The reasons for the divergence in TB incidence and public health costs are several. In 1989 CDC published and widely distributed a strategic plan to eliminate TB in the United States. Part of the plan to hasten TB elimination was to identify and test high-risk groups for the purpose of offering preventive therapy. This campaign heightened TB awareness in the public health community, resulting in more TB testing. However, it was the outbreaks of multidrug-resistant (MDR) TB in New York City and Miami, reaching the popular press as well as the medical literature, that raised fears among Americans of a disease most considered nearly eradicated. This fear may have contributed to a demand for testing among low-risk individuals, the so called "worried well." Record levels of immigrants from foreign countries have also contributed to increased TB testing in that segment of the population in recent years.

Finally, the divergence of cost and cases is inherent to all public health disease control. Dr. George Comstock of Johns Hopkins University recently noted: "It must be kept in mind

(Continued on page 7, see " A TB divergence")

ACIP recommends new polio schedule

The efforts to eradicate wild polio virus continue to be successful throughout the world due to the efficacy of oral polio vaccine (OPV). Although the last case of indigenously acquired wild-type polio occurred in the Americas in 1991, continued immunization is necessary until complete eradication of polio is achieved throughout the world. OPV has been the vaccine of choice for eliminating wild-type polio virus because it is easy to administer and it induces an intestinal immunity that restricts the spread of wild-type virus. The vaccine virus spreads from stools of vaccinated individuals to those who may not be immunized, thus increasing community protection. However, OPV has been associated with rare cases of paralytic disease (vaccine-associated paralytic poliomyelitis, VAPP). Eight to ten cases of VAPP occur every year in the US (about one case per 2.4 million doses administered). Most of the cases of VAPP are associated with the first dose of vaccine. The risk decreases drastically with subsequent doses. An alternative to OPV for polio vaccination is inactivated polio vaccine (IPV). IPV does not cause VAPP and produces immunity comparable to OPV in individual vaccine recipients.

In an effort to reduce the frequency of VAPP by 50 to 75%, the Advisory Committee on Immunization Practices (ACIP) voted unanimously to recommend a new sequential IPV-OPV schedule. The new childhood schedule will consist of two doses of IPV followed by two doses of OPV. The new recommendations are considered transitional, moving toward an all IPV policy when the chance of imported disease is reduced, and ultimately no vaccination when polio is eradicated.

Full implementation of the new schedule cannot occur until (1) adequate supplies of IPV are available, (2) a new vaccine information statement is developed, and (3) appropriate education of providers and parents is initiated. The Centers for Disease Control and Prevention (CDC) is developing these materials. The new recommendations will be final upon acceptance by the CDC and publication in *Morbidity and Mortality Weekly Reports*. OPV remains a safe and effective vaccine and should be used as the preferred vaccine until the new policy can be fully implemented (projected for early 1997). Vaccination of children for whom OPV is not contraindicated should not be delayed.

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Epidemiology *Update*

Outbreak of cryptosporidiosis, Central Massachusetts, July–September 1995

In September 1995, 16 cases of cryptosporidiosis were reported from a Worcester hospital laboratory. This appeared to be a sharp increase over the previous 31 months, during which time the same laboratory had reported just seven cases. By the end of September, area laboratories had identified *Cryptosporidium* in specimens from more than 40 residents of Worcester and surrounding central Massachusetts communities.

In response to these reports of increased cryptosporidiosis and because of the potential for a large-scale outbreak, the Epidemiology Program invited representatives from the Centers for Disease Control and Prevention (CDC) to assist in an investigation of the outbreak. The investigation included a review of hospital laboratory data and testing procedures, a randomized community survey among area residents, an assessment of diarrheal illness in local nursing homes, and a case-control study. To date, no source has been implicated as a common exposure among the study cases and an increase in disease among immunocompromised individuals and others with increased susceptibility has not been identified.

Cryptosporidiosis is a parasitic infection characterized by frequent, watery diarrhea, abdominal cramps, and occasional low-grade fever. Symptoms persist for an average of ten days in non-immunocompromised individuals. *Cryptosporidium* oocysts, commonly transmitted from person to person through the fecal-oral route, are shed in the feces of humans and animals, and can survive in the environment for extended periods of time, occasionally contaminating food or water sources.

Persons with compromised immune systems are reminded that they may experience a more prolonged and severe illness. These individuals and others may consider taking steps to minimize their chances of becoming infected and further spreading the organism. Information on preventive measures may be obtained from health care providers, local boards of health, or the Epidemiology Program.

The Centers for Disease Control and Prevention and
Emory University School of Public Health announce:
Epidemiology in Action:
A Course for Public Health Professionals
April 30 - May 10, 1996 in Atlanta, GA
Application deadline: March 15, 1995
For more information or an application, call
(404) 727-3485 FAX (404) 727-4590

Bat rabies (cont. from page 1)

in February of 1995, a 4-year-old girl was found asleep in the same room with a bat. She was examined for wounds and, finding none, her parents disposed of the bat. The child later died of the same strain of rabies that was later recovered from the disinterred bat. Although only a small percentage of bats actually has rabies, it should be remembered that **healthy** bats normally avoid people and their living areas. Potential exposures to bats should be carefully evaluated. (See also "You be the epi" on page 8.)

Community-wide outbreaks of shigellosis

In 1991, the greater Springfield, MA area experienced a community-wide outbreak of shigellosis, caused by *Shigella sonnei*. At least 1000 cases occurred over a six-month period. Seventeen communities in four counties were affected by this outbreak, with 65% of the cases occurring in children under the age of ten years. Aggressive, monitored handwashing campaigns were instituted in day-care centers, schools, after-school programs and food establishments. Extensive involvement by the State and local health departments together with community organizations made it possible to contain the outbreak.

During the past few months, over 50 cases of shigellosis caused by *Shigella sonnei* have been identified among members of religious communities and their contacts in the greater Boston area and Providence, RI. The cases have been related to several private Jewish schools and day-care centers located in Brookline, Boston, and Sharon, MA. The majority of cases has occurred in school-aged children and their younger siblings.

Shigellosis is an acute bacterial disease characterized by diarrhea (often bloody) accompanied by fever, nausea and sometimes vomiting, cramps and systemic toxicity. Asymptomatic infections frequently occur. The mode of transmission is fecal-oral, with humans being the only known source. *Shigella* is very easily spread from person to person, especially among small children and in household settings. As few as ten organisms can cause infection. Outbreaks can occur when large numbers of people live, work or play close together (even in large and extended families). They can also occur when food or water has been contaminated with *Shigella*.

The outbreaks that occurred in Springfield and the one now occurring in the greater Boston area illustrate how quickly these situations can escalate and how important it is to implement appropriate control measures as soon as possible. These outbreaks have also illustrated a need to be sensitive to the varied cultural and traditional lifestyles and practices of affected communities. Language and cultural barriers can pose unique challenges when approaching affected communities. These challenges can be met, however, when everyone works together to find acceptable, linguistically and culturally appropriate, effective solutions.

April is rabies awareness month!

April is Rabies Awareness Month in Massachusetts! Last year, the MDPH participated in Rabies Day at the State House, had public service announcements on several radio stations, and placed rabies informational bookmarks in all children's rooms in public libraries across the State. In 1996, efforts will be focused on: (1) increasing awareness of bat rabies (see "Bats" on page 1 and "You be the epi" on page 8), (2) increasing awareness of cat exposures, (3) educating pet owners about changes in vaccine requirements for dogs and cats, and (4) educating children about rabies. Cities and towns are encouraged to educate residents, pet owners, and children about rabies during April and throughout the year.

STD *Update*

Report from Beijing

On December 14, despite blizzard conditions, almost 50 participants (virtually everyone who had registered) turned out for "A Report from Beijing," a conference co-sponsored by the Division of STD Prevention. The conference focused on issues of reproductive and human rights, empowerment through education and women's growing risks from STDs.

Presenters included Jackie Jenkins Scott, Director of the Dimock Community Health Center; Marlene Fried, author and professor at Hampshire College and expert in issues of population control and reproductive freedom; as well as Nancy Mirriam Hawley, a therapist and member of the Women's Health Book Collective. All of the speakers attended the Beijing conference and were able to share personal as well as professional perspectives. The program was co-sponsored by the MDPH Bureau of Community and Family Health (Family Planning and Women's Health) and the HIV/AIDS Bureau, as well as by the Center for Women in Politics and Public Policy of the John W. McCormack Institute of Public Affairs at U. Mass., Boston. Elizabeth Sherman, Director of the Institute, opened the program.

Poster to be part of teen outreach campaign

Over the last year a poster entitled "Thinking about sex? Think about STDs!" was developed by the Division of STD Prevention in collaboration with a number of teen peer groups. Teens from around the state previewed draft designs for the poster. The poster has been revised extensively based on input received. The final version will be distributed across the state to sites where teens would be most likely to see it, including school and school-based health clinics, as well as a variety of health and social service agencies.

The poster addresses issues of both prevention and treatment. The poster encourages teens to telephone one of several listed numbers of the STD Division and encourages teens who may need treatment to call to find the location of the nearest clinic. In addition, for teens who may not be aware of clinic policies, the poster lets teens know that services are available without parental consent and free to those who may not be able to pay for treatment. For poster copies, contact Christie Burke at (617) 983-6959.

HIV infection rate falls as a result of STD case management

A recent study done in Africa documented a dramatic 42% drop in HIV transmission when STD case management services were made available. STD case management has been included among HIV prevention strategies, but potential impact on the spread of HIV has not previously been so convincingly documented. This work highlights the interaction of HIV and other STDs and demonstrates that STD control and prevention can of itself contribute to prevention of HIV transmission.

One of the most interesting findings of this intervention trial is that the largest impact on HIV incidence occurred among very young women (15-24 years old). The potential for STD/HIV reduction is highest among young women. Young women are at increased risk for all STDs, including HIV, on the basis of both behavioral and biological mechanisms. For those interested in more information, the article is entitled "Impact of improved treatment of sexually transmitted diseases on HIV infection in rural Tanzania: randomized controlled trial" *Lancet*, August 26, 1995, Volume 436, pp. 530-536.

STD annual report available soon

Data for the annual report were gathered and are being analyzed as this issue goes to press. The report will be available soon. This report will contain an analysis of Massachusetts' STD epidemiological data, including trends for the whole state as well as for specific populations, such as adolescents, women, and communities of color. To obtain a copy of the report, call (617) 983-6940.

600 Share in seven-site satellite symposia

"STD Update 1995: The Viral STDs," the first satellite conference of the recently funded STD/HIV Prevention Training Center (PTC) of New England, attracted over 600 participants at sites throughout New England. Downlink sites included Holyoke in Massachusetts, Durham in New Hampshire, Presque Isle and Augusta in Maine, Waterbury in Connecticut, Providence in Rhode Island and Burlington in Vermont.

Presenters at the conference included Judith Wasserheit, MD, MPH, the Director of the Division of STD Prevention, National Center for HIV/STD/TB Prevention, CDC. Dr. Wasserheit was broadcast from Atlanta via audiolink. Other highlights of the conference included a presentation on human papilloma virus by Cheryl Gibson, MD, broadcast from the University of Vermont College of Medicine. The other presenters were located at the Hilton Colonial in Wakefield and were linked by satellite to the other sites. Dr. Raymond Koff discussed hepatitis B, and Dr. David Dorsky reviewed herpes simplex virus infection. Dr. Patricia Hibberd discussed cytomegalovirus as an STD. The afternoon sessions included a presentation on clinical manifestations of HIV and antiretroviral therapy by Dr. Kenneth Mayer. This was followed by a panel discussion including Dr. Mayer, and Drs. Paul Skolnik and Sarah Cheeseman.

The training schedule of the STD/HIV PTC of New England is now available. Please call (617) 983-6945 to request a copy of the schedule.

To receive your *free* subscription to Communicable Disease *Update*, call (617) 983-6800.

Regional *Update:* Immunization

Region	Epidemiologists	Regional Nurses	Phone
Boston	Nancy Harrington	MaryEllen Monahan, R.N.	(617) 534-2473
Metro	Lisa Berger, M.P.H.	Jean Franzini, R.N. Peg O'Toole, R.N.	(617) 983-6860
Western	Marija Popstefanija, M.P.H.	Judith Coates, R.N.	(413) 545-6600
Northeast	Karen Ogden, R.N.	Bertha Hopper, R.N. Joan Daley, B.S.N., R.N.	(508) 851-7261
Southeast	Edward Pomfred, R.N.	Joan Thompson-Allen, R.N. Sonia Kobrin, R.N.	(508) 947-1231
Central	Jack Bicknell	Patricia Reynolds-Caouette, R.N.	(508) 792-7880

Epidemiology: Pertussis outbreaks continue throughout the state

- All regions of the state continue to struggle with outbreaks of pertussis. An aggressive approach to locate contacts, enforce prophylaxis compliance, and identify new and suspect cases is essential in order to control these outbreaks. Pertussis should be suspected in any individual with a prolonged cough illness. For more information about control measures, contact your regional epidemiologist. Regional staff are available to perform in-services on the epidemiology, control, and prevention of pertussis. Call today to schedule an in-service.

Vaccine Notes: Vaccine accountability essential

- Providers are reminded to submit accountablity forms for influenza and pneumococcal vaccine to their regional immunization office as soon as possible! Accountability of vaccines will impact future vaccine orders.
- Pnuemococcal vaccine is still available for use in the elderly and high-risk populations. This vaccine may be administered at any time, not only during flu season. Call your regional immunization office to obtain vaccine.

Educational Activities: New immunization materials available

- Immunization brochures and coloring books in Haitian Creole are now available. Crayons, brochures and coloring books in Chinese, Kmer (Cambodian) and Vietnamese are also available. Supplies are limited so call your regional office today.
- Plastic covers for the Blue Book (immunization record) are now available. Help to protect the important information contained in the Blue Book by using the protective cover. Call your regional immunization office to obtain Blue Books and their covers.
- New item: Magnets promoting childhood immunization will soon be available for new parents. The magnet is a frame for a picture of a new baby and reminds parents that children need immunizations at 2, 4, 6, 12 and 15 months. A convenient "next appointment" reminder is also included. Magnets will be distributed to maternity hospitals throughout the state.
- VIM Translations now available: Thanks to the California Department of Health Services, translations of the OPV-IPV, Td, MMR, and DTP/DTaP/DT Vaccine Information Materials are now available in Armenian, Kmer (Cambodian), Chinese, Farsi, Hmong, Japanese, Korean, Laotian, Portuguese, Romanian, Russian, Samoan, Tagalog, and Vietnamese. Contact your regional immunization office to obtain copies of these materials.

Plan ahead

April 21-27 is National Infant Immunization Week, our annual opportunity to emphasize the importance of protecting babies' health by immunizing them on time. The MIP is once again offering payroll stuffers to help employers remind parents, grandparents, aunts, uncles and friends of the family that the best way to protect infants from ten dangerous diseases is to vaccinate them early, while they are still babies. The stuffers fit easily into pay envelopes and are printed in English on one side, Spanish on the other. If you'd like some for your employees, please call Caryl Haddock at (617) 983-6811.

Save the date

The Massachusetts Immunization Program will sponsor several National Immunization Program satellite training courses throughout the state during 1996. Approval for CME and CEU credits is pending.

- *Vaccines and International Travel:* March 8, 11:30 to 3:30 pm. Contact Walt Lasota at (617) 983-6834 for details.
- *Epidemiology and Prevention of Vaccine Preventable Diseases:* May 31, June 7, 14, and 21, 12:00 (noon) to 3:30 pm. Contact Jean Franzini at (617) 983-6850 for details.
- *Immunization Update:* September 12, 12:00 (noon) to 2:30 pm. Contact Jean Franzini at (617) 983-6850 for details.

Regional *Update:* Immunization

Vaccines in action

Q: A 15-month old girl is seen in your office. She received one dose of *Haemophilus influenzae* B (Hib) vaccine at 2 months, a second dose at 4 months, and a third dose at 12 months. Should you administer a booster Hib vaccine to this child?

A: The doses and spacing of Hib vaccine depend upon the type of vaccine administered. All infants should receive a primary series of conjugate Hib vaccine consisting of two or three doses of vaccine depending on type of vaccine used. There are three Hib conjugate vaccines licensed for infant use. The optimal interval between primary series doses is two months but the minimum interval is one month. The booster dose of Hib vaccine should be given no earlier than 12 months of age and at least 2 months after the previous dose of Hib. The following table presents the dose schedule for the different vaccine types.

	Primary Series			**Booster**
Vaccine Type	**2 months**	**4 months**	**6 months**	**12 - 15 months**
HbOC ("HibTITER")	Dose 1	Dose 2	Dose 3	Dose 4
PRP-T ("ActHIB") ("OmniHIB")	Dose 1	Dose 2	Dose 3	Dose 4
PRP-OMP ("PedvaxHIB")	Dose 1	Dose 2		Dose 3

Once the primary series has been completed, any Hib conjugate vaccine may be used as a booster.

For the 15-month old girl mentioned above it would be necessary to evaluate her vaccination history more fully. What vaccine did she receive for her first three doses? If she received PRP-OMP ("PedivaxHIB"), then no further Hib vaccination would be necessary. If she receive HbOC ("HibTITER") or PRP-T ("ActHIP" or "OmniHIB"), then a booster dose should be administered (a minimum of two months after the last dose. In this case the dose was given at 12 months).

The age of the child and the vaccine used will determine the number of doses of Hib vaccine necessary. An evaluation of the child's vaccine history and reference to the package insert of the vaccine are essential for proper vaccination with Hib vaccine.

Regional *Update:* TB

Western & Central MA News: Tuberculosis update

TSA Nurse: Carol Cahill (413) 736-8939

Introductions: TSA I consists of 5 Counties - Berkshire, Franklin, Hampden, Hampshire and Worcester. The Public Health Nursing Advisor is Carol A. Cahill, R.N. Secretarial duties are performed by Evelyn Thomas. We have one part-time case register surveyor, Kathleen Lupien. Community outreach is provided by Marcos Rodriguez (Springfield area) and Hector Baez (Worcester Area). The Regional Office is located at the Springfield Health Department.

Clinical Services: Free clinical services are provided at Baystate Medical Center, Springfield; Berkshire Medical Center, Pittsfield; Burbank Hospital, Fitchburg; Franklin Medical Center, Greenfield; Harrington Memorial Hospital, Southbridge; Holyoke Hospital, Holyoke; and Family Health & Social Services, Worcester (in the former Worcester City Hospital).

Epidemiology: In 1994, 47 cases of *M. tuberculosis* were verified. Cities in TSA 1 with case rates higher than the state's case rate include Fitchburg, Holyoke, Leominster, Springfield, and Worcester.

Who should test for TB and prescribe preventive therapy?

Public health TB clinics should continue to provide expert consultation on all aspects of TB treatment, including preventive therapy, but should not be the principal source of screening or preventive therapy. Ideally, high-risk persons should be tested for TB in primary care sites and at high-risk institutions, and appropriate preventive therapy should be prescribed and monitored monthly, as currently recommended. As active TB continues to decline in the general population, the challenge to public health departments will be to educate the medical community to avoid general TB screening in favor of screening and treatment focused on high-risk persons. As long as TB remains a world problem, total elimination in this country is unlikely, and the capacity to manage the disease at low levels will need to be maintained.

Immunization *Update*

MIP gears up for varicella vaccine distribution

As you know, the FDA recently licensed Merck's varicella vaccine. This vaccine is very sensitive to temperature changes. To ensure that the cold chain is maintained, the manufacturer will only ship directly to end-users. The Massachusetts Immunization Program (MIP) cannot obtain varicella vaccine until an ordering system, a federal contract, and funding for the vaccine have been established. We expect to begin distribution in Massachusetts by the spring of 1996. The MIP will develop a separate ordering system for this vaccine in our state.

The national Advisory Committee on Immunization Practices (ACIP) is developing recommendations for the use of varicella vaccine. Groups that should receive vaccine will include:

- All healthy children 12-18 months old, *regardless* of chickenpox history.
- All children 11-12 years old without a reliable history of chickenpox.
- People in the following groups without a reliable history of chickenpox:
    - Adolescents and adults (13 years and older) who are household contacts of an immunocompromised person
    - Health care workers and others whose occupations place them in proximity to persons at higher risk for complications
    - Child care workers/teachers of young children and others whose occupations place them at high likelihood of exposure.

It is important that you assess your capacity for handling varicella vaccine now, before distribution begins. This live-virus vaccine is very temperature sensitive and requires **careful** handling and storage.

- Varicella vaccine must be stored frozen in a freezer at -15° C (5° F) or colder.
- Household freezers manufactured within the last five to ten years are designed to maintain these temperatures in the freezer. In freezer-refrigerator combination units, appropriate temperatures can usually be maintained if there is a separate sealed and insulated freezer compartment. The manufacturer recommends a frost-free freezer to avoid breaking the cold chain related to defrosting.
- ***Dorm-style cube refrigerators and water cooler refrigerators are not adequate.***
- If varicella vaccine is not used within *30 minutes* after reconstitution it must be discarded.
- Diluent should be stored separately, at room temperature or in a refrigerator.

To be prepared, you should keep a daily log of freezer temperatures now to ensure that your freezer is cold enough to store varicella vaccine safely. If you have been relying on dorm-style or water cooler refrigerators, you will have to invest in a new freezer if you want varicella vaccine for your patients. Varicella vaccine is expected to cost nearly $40 per dose. Therefore, the MIP will not offer this vaccine to any provider who lacks adequate storage capacity.

Clarification of the availability of hepatitis B vaccine

In order to comply with Centers for Disease Control and Prevention's recommendations for the prevention of hepatitis B, the Massachusetts Immunization Program currently provides hepatitis B vaccine for the following groups:

- All children born on or after January 1, 1992*
- All children entering kindergarten in 1996
- All children enrolled in Head Start
- All adolescents entering seventh grade in 1996
- All 12-year-olds attending ungraded classrooms
- All adolescents receiving care at public Sexually Transmitted Disease clinics
- All youths in Department of Social Services foster care
- All youths in Department of Youth Services juvenile detention facilities
- All youths in Job Corps Residential Training Programs

For further clarification, call your regional epidemiologist (see page 4 for phone numbers).

*For these children, hepatitis B vaccine is required for entry into daycare, and will be required for entry into kindergarten in 1996.

MIP/VFC 1996 enrollment

The Massachusetts Immunization Program (MIP)/Vaccines for Children Program (VFC) has entered its second year. Federal guidelines require providers update information about their practices on an annual basis. The enrollment forms were simplified for 1996 and a shorter enrollment form was developed for adult-only practices. Forms were sent out to providers the first week of December. The deadline for re-enrollment was **January 31, 1996**. Providers who have not returned their enrollement forms will not be able to receive vaccines from the state until they re-enroll in the program. If you need another copy of the 1996 enrollment forms call your regional MIP office (see page 4 for phone numbers).

A word of thanks

The Hepatitis B Prevention Project wishes to thank Marcia Buckminster of the Framingham School System and Maureen Cormier of MetroWest Medical Center for their service to schools providing hepatitis B vaccine to sixth-graders.

TB *Update*

A TB divergence (cont. from page 1)

that as cases become more scarce, cost-effectiveness is certain to diminish. The cost per case of finding, treating and preventing tuberculosis will rise as the economies of scale diminish: the last case to be eliminated will be the most expensive one."

TB screening and preventive therapy: focusing priorities

Who should be screened for TB?

The short answer is: *fewer and perhaps different people than are currently being TB tested.* The Advisory Council for the Elimination of TB just published a revision of CDC's 1990 guidelines on TB screening (*MMWR* 1995; 44:19-34; RR-11). It emphasizes that TB screening should be a lower priority for health departments than the two other major public health TB priorities. These priorities are (1) complete treatment of active disease and (2) investigation of contacts. The guidelines suggest ways to determine who should be screened for TB in a given community and, just as importantly, who should not be screened. It provides details on the use and limitations of the PPO skin test, still the only widely used test to detect TB infection without disease. Importantly, it revises CDC recommendations on anergy testing, commenting that there is insufficient scientific basis for the practice to justify widespread use of multiple antigens to assess anergy.

As noted in the previous commentary, there appears to be more TB testing taking place than can be justified by TB case rates, especially in Massachusetts, a low-risk state. TB risk is highly focal, and is best assessed by careful analysis of local epidemiology. Unnecessary TB skin testing diverts public health resources from more cost-effective activities.

Under low-prevalence conditions, the TB skin test (purified protein derivative, PPD, by the intradermal, Mantoux technique) has a low predictive value, which means that a significant percentage of those who test positive are not infected with TB. Overdiagnosis of infection can lead to unnecessary concern, more testing, unnecessary X-rays, and unnecessary preventive therapy with possible toxicity. Skin testing is unlikely to help detect active TB. TB screening should be reserved for high-risk persons who are likely to be candidates for preventive therapy. Persons currently considered high-risk for TB, and persons often tested routinely who are usually not at high-risk, are listed below. In some cases, current regulations require testing of groups, such as teachers who are no longer considered at high risk for TB. Efforts to update TB screening requirements are underway.

High-risk persons for whom TB testing is most useful:

- Close contacts of an active TB case, especially small children and other vulnerable persons.
- Medically high-risk persons, especially HIV-infected and other immunocompromised persons.
- Injecting drug users.
- Foreign-born who are recent arrivals from high-prevalence countries.
- Residents and employees of certain congregate settings, especially shelters for the homeless, nursing homes, correctional facilities, and acute and chronic care hospitals.

Persons often tested for TB who are not likely to be at high-risk, unless other factors are present:

- Most school children.
- Most teachers.
- Food handlers, hairdressers, and other service workers.
- Most foreign-born persons here for more than five years.
- Most pregnant women.
- Most students and workers in an institution where an active case is identified (unless concentric circle testing indicates otherwise).

Is x-ray screening for TB useful?

Despite the limits of PPD testing for TB infection, it is far more useful than any other form of screening. Although mass X-ray screening was done in this country earlier in the century, the prevalence of active disease is far too low to justify routine X-rays for TB. Exceptions are some inner city jails where the TB risk is high, the consequence of unsuspected cases serious, and the turnover rate too high to permit effective skin test screening. X-rays of symptomatic persons, close contacts, and PPD-positive persons as part of a clinical evaluation are different from routine screening and are often necessary. Annual chest X-rays for a PPD-positive person are not recommended.

Who should receive preventive therapy for TB?

The persons who benefit most from isoniazid (INH) preventive therapy are those at highest risk of active disease, as listed below:

Highest priority for TB preventive therapy (any age, PPD > 5mm induration)

- Close contacts to an active case
- HIV-infected persons
- Persons with an abnormal chest X-ray consistent with "old" inactive TB

High priority for TB preventive therapy (any age, PPD > 10mm induration)

- Persons with diabetes and other medical conditions predisposing to active TB
- Children under 4 years of age

Others for whom TB preventive therapy is indicated

(Under age 35, PPD > 10mm)

- Foreign-born (arrival within 5 years)
- Persons in congregate settings
- Health care workers

(Under age 35, PPD > 15mm)

- No TB risk factors

(See also "Who should test for TB" on page 5.)

A Book Review: *The White Plague. Tuberculosis, Man and Society* by Rene and Jean Dubos

The resurgence of tuberculosis in the 1980s stimulated a parallel resurgence of interest in the history of this disease. This included publication of several excellent books, including *Bargaining for Life* by Barbara Bates (Philadelphia: U. Penn., 1992), *The Forgotten Plague* by Frank Ryan (Boston: Little Brown, 1992) and *Living in the Shadow of Death* by Sheila Rothman (Baltimore: Johns Hopkins, 1994). First published in 1952 and republished by Rutgers University Press, *The White Plague* is a classic work on tuberculosis. It is an engaging and readable work that provides relevant insights for today's reader. The book is primarily about the nineteenth century and the role that tuberculosis played in people's life, death, and world view. In the middle of the nineteenth century, tuberculosis was the single most frequent cause of death in Massachusetts, accounting for 30% of all deaths. The book is rich in literary reference and historical insight in the style of Dubos' later works on human nature, civilization and the environment. Of special note, in view of recent mathematical models of the historical growth of the tuberculosis pandemic in the global human population, is the Dubos' discussion of trends in tuberculosis in relation to urbanization and industrialization around the world since 1800. The story of Koch's brilliant work in tuberculosis is presented, as well as his development of tuberculin as a potential vaccine "cure" and the resulting use of tuberculin as a diagnostic reagent. The explanations of disease and infection and the pathogenesis of tuberculosis remain as lucid and effective as they were more than forty years ago. One particular comment of the Dubos' strikes a very relevant note today: "The unit cost [of case finding] will probably increase as the prevalence of infection decreases and there is reason to fear that many communities will abandon too soon the search for active cases." So, as new and relevant information about tuberculosis is published in journals and books, it would serve those interested in both the history and biology of this disease to read or re-read the Dubos' classic. **New Brunswick, NJ: Rutgers University Press, 1987**

Communicable Disease *Update*
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You be the epi

A kindergarten teacher calls concerning a bat that was flying around in her classroom. Twelve 5-year-old children and two teachers saw a bat in their classroom on two consecutive days. On the third day, the bat disappeared and cannot be located. The teachers cannot rule out children's exposures to the bat. The school nurse is sure that the bat did not attack anybody, and none of the children have signs of a bite or scratch from the bat. According to the teacher, the school is very old, and bats are often seen in or around the building. The teacher is seeking advice concerning any possible risk of rabies exposure.

Analysis

Most of the cases of human rabies acquired in the U.S. are due to exposure to bats, and almost all of them fail to have a clear history of bat exposure. Rabid bats rarely attack humans. However, any contact or possible contact with bats should be taken seriously. Bat bites may go unnoticed or be confused with insect bites. Postexposure prophylaxis should be administered in situations where a bat is physically present and a bite or any other contact cannot be completely ruled out. This is very important when children, who may not be able to tell an adult what happened, are involved, or when an adult witness is not available. In this situation, since the bat is not available for testing and a bat bite or scratch cannot be ruled out, postexposure prophylaxis should be administered to all the children who were in the classroom. Both teachers are certain that they did not have any contact with the bat, so treatment for them is not necessary. The school building should also be professionally "bat proofed" so as to avoid a repeat of the incident.

MASS. HS 30. 1703: 4/2

For Healthier Lives

Massachusetts Department of Public Health

Communicable Disease *Update*

Newsletter of the Bureau of Communicable Disease Control

Volume 4 **Issue 2** **April 1996**

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Pet ferrets and public health concerns

A new law legalizing ferret ownership in Massachusetts went into effect on March 6, 1996. Public concerns over ferret ownership focus on accounts of severe, unprovoked attacks on infants and small children and on the risk of ferrets contracting rabies. More than 400 ferret attacks on humans have been documented since 1978, including 63 unprovoked attacks on infants or small children, and one fatality. Although attacks by dogs account for more reported injuries and deaths, reliable data about ferret attacks are not available for comparison.

Although there is a rabies vaccine for use in ferrets, vaccination does not eliminate the possibility of rabies. Nineteen cases of rabies in ferrets have been documented since 1958, including a Connecticut case in October 1995. The Massachusetts Department of Public Health (MDPH) in compliance with recommendations from the National Association of State and Public Health Veterinarians, recommends that in the case of a bite or scratch, the ferret should be tested for rabies as soon as possible. Because the infectious period for a rabid ferret prior to showing clinical signs of the disease is unknown, MDPH cannot recommend a quarantine period for ferrets after they bite or scratch. Health care workers may want to advise patients and their families about the risks involved in ferret possession.

If you have questions about human exposure to ferrets, please contact the Division of Epidemiology and Immunization at (617) 983-6800.

Local HMO wins national award

The U.S. Department of Health and Human Services and the Group Health Association of America recently recognized 12 health plans for increasing their numbers of fully immunized 2-year-olds. Harvard Community Health Plan (now known as Harvard Pilgrim Health Care) was awarded two silver medals, in the Innovation and the Continuous Quality Improvement categories of the *Celebrating Innovation* award program.

The plan's Health Centers Division developed and implemented the Pediatric Immunization Registry, an automated quarterly reminder system that tells pediatricians which of their patients are lacking immunizations. Clinicians are given computer printouts detailing missing vaccines, and are responsible for determining why the patient is not up to date and solving the problem, if possible. During the first year the Pediatric Immunization Registry has been in use, the immunization rate among patients 19–30 months old has risen from 53.7% to 81.8% for the health plan's 15 recommended vaccine doses.

(Adapted from Immunization Action News, Vol. 3, No. 1)

STD partner notification in the United States

The Division of Sexually Transmitted Disease (STD) Prevention conducted a nationwide survey of partner notification programs to assess the range of policies and procedures and look at measures of effectiveness such as case finding and treatment. To date, 50 sites have responded to the survey and preliminary results are now available.

Identifying people exposed to infectious diseases and applying appropriate interventions are the core of public health practice. Transmission of STDs is interrupted when partners are notified of exposure and apprised of the need for clinical evaluation. This model of public health intervention was developed for curable bacterial diseases such as syphilis and gonorrhea. The impact of partner notification (PN) on *viral* STDs has

(Continued on page 3)

Emerging and re-emerging infectious diseases—a worldwide health threat

In the past few years there has been a resurgence of interest in emerging and re-emerging infectious diseases threatening global health.

INTERNATIONAL CONCERN

According to the World Health Organization (WHO), the six most important re-emerging diseases are:

Tuberculosis: increased 27.8% in case notification from 1984–86 to 1990–93.

Diphtheria: 54,516 cases reported in 1994, up 141% from 1990.

Cholera: 384,403 cases reported in 1994, up 454% from 1990.

Dengue fever: reported in many Latin American and Caribbean countries for the first time in 50 years.

Yellow fever: reported for the first time in decades in Latin America.

Bubonic plague: over 2,000 cases reported in 1993 and 1994, the highest total since data were first collected globally in 1954.

(Continued on page 2)

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Epidemiology *Update*

HGE—one more reason to avoid ticks

The tiny deer tick (*Ixodes scapularis [dammini]*), known to Massachusetts residents as the infamous carrier of Lyme disease and babesiosis, is believed to carry another emerging infection, human granulocytic ehrlichiosis (HGE). HGE, an acute febrile illness, can be mistaken for rashless Lyme disease or babesiosis. Since its discovery in 1993, over 150 cases of HGE have been reported to the CDC (some retrospectively) with at least four fatalities. Two Massachusetts cases described in the literature were in tick-exposed residents of Cape Cod and the Islands.

Clinical symptoms of HGE include fever, headache, malaise, aches, chills, sweats, nausea, and vomiting. Cough, joint pain, confusion and a macular or papular rash at any site on the body are less common. Common lab findings include leukopenia, thrombocytopenia, and elevated liver function tests.

HGE is treatable with doxycycline and other tetracyclines. Controversy remains over the effectiveness of chloramphenicol, the antibiotic of choice for younger children. Symptoms may swiftly progress to the life-threatening stage, so it is critical that treatment begin the moment there is a strong suspicion of HGE—do not wait for laboratory confirmation.

The best way to prevent transmission of HGE, as well as Lyme disease and babesiosis, is to prevent tick exposure. *Ixodes* ticks are so small that nymphal ticks (the life stage most likely to spread disease) are only the size of a poppy seed. They cannot fly or jump, but cling to long grass or bushes, waiting to grab someone who brushes past.

To prevent tick exposures:

- Don't walk bare-legged in tall grass, dunes, or woods where ticks may live.
- If walking in tick habitats, wear a light-colored long-sleeved shirt, light-colored long pants tucked into socks, and shoes with closed toes. Light-colored clothes will make the dark brown ticks easy to spot.
- Use insect repellent with no more than 30–35% DEET. Do not put insect repellent on a child's face or hands. Wash all skin treated with insect repellent thoroughly.
- Do a "tick check" every time you come in from outdoors and check children often for attached ticks. Look for ticks in all joints, around the hairline, behind and in ears, and on thighs and navels. They are very tiny, so look for a new dark brown "freckle."
- To remove a tick, use tweezers to grasp the tick's mouthparts firmly, and pull it straight out using gentle, steady pressure. Squeezing or squashing the tick can force bacteria into the wound. Do not use petroleum jelly, nail polish remover or heat to remove the tick.

Emerging and re-emerging infectious diseases...

(Continued from page 1)

Reasons for these increasing health threats are diverse. Population growth and overcrowding lead to lack of clean water and adequate housing. Increases in international travel facilitate the spread of infections across national borders. Scientific communities and governments have grown complacent about the threat of infectious diseases. Adequate surveillance is not in place to recognize and handle emerging problems, either in the community or in diagnostic laboratories. A growing number of organisms are developing resistance to antibiotics, making treatment more difficult.

Additionally, climatic factors such as global warming result in a higher incidence and wider distribution of vector-borne and other diseases (i.e., malaria, dengue fever, river blindness, cholera and toxic algae).

EMERGING INFECTIONS IN THE U.S.

In the United States, drug-resistant *Streptococcus pneumoniae* has increased 10.9% since 1987 at 12 sentinel hospitals. Surveillance for hantavirus pulmonary syndrome in 1993 identified 113 confirmed patients in 23 states. In 1993, a waterborne *Cryptosporidium* outbreak affected 400,000 Milwaukee citizens. There were 13,043 reported cases of Lyme disease in 1994, with 213 from Massachusetts (a 58% increase from 1993). Human granulocytic ehrlichiosis (HGE), a sometimes fatal tick-borne disease first described in 1993, has been identified in Massachusetts residents. Infection with *Escherichia coli* O157:H7 and hemolytic uremic syndrome (HUS) have become major concerns related to foodborne outbreaks in the state.

MASSACHUSETTS RESPONDS

The Massachusetts Department of Public Health (MDPH), local health departments, and the medical community are addressing emerging diseases and the need for comprehensive and rapid public health responses in a variety of ways:

- Development of electronic data transmission capacity with other states, national reference laboratories and the Centers for Disease Control and Prevention (CDC)
- Pilot electronic data transmission projects with several local health departments planned for 1996
- Active case investigation of all cases of HUS by MDPH epidemiologists
- Development of a pilot enteric disease sentinel surveillance system with a major Massachusetts HMO
- Training opportunities for disease investigation staff at local boards of health; to include responding to foodborne outbreaks, methods and priorities in case investigation, responding to emerging disease concerns, utilizing epidemiologic software for case investigation and information management at the local level
- Provision of reference laboratory services to MDPH and other state health departments in the molecular epidemiology of pathogens using new testing technologies such as pulsed field gel electrophoresis

STD *Update*

STD partner notification...

(Continued from page 1)

been questioned. Partner notification is a valuable service, even when the disease in question is viral. Partners are still provided information about exposure, facts of which they may not have been aware, and risk behaviors that they may not have recognized. Options for follow-up services are also provided during notification. Partners are offered guidance about lowering their level of risk in the future.

The first survey question asked which model of notification was used for each STD *(see table below)*. Models include notification by the patient, by the provider, or by a combination of the two called "conditional referral." In conditional referral, patients have a defined time in which to inform partners of exposure. If partners do not seek medical care during that time, a public health provider will visit to assure that notification has occurred. Most states used a mixture of these models.

Disease	Patient Referral	Partner Referral	Conditional Referral
Syphilis	13	31	42
Gonorrhea	32	32	35
Chlamydia	36	24	27

The second question *(see table below)* asked what type of person conducted notifications for different STDs. Disease Intervention Specialists (DIS), a commonly used term for STD field epidemiologists, were the most common practitioners of PN, followed by Public Health Nurses. Mixed models were common here, too.

Disease	DIS	RN	HIV Counselor	Other
Syphilis	47	5	1	1
Gonorrhea	38	25	1	4
Chlamydia	24	22	1	4

Questions about the content of notification, educational materials used, and methods of evaluating the service will be analyzed and a complete report will follow.

Talc in condoms

Recent issues of *Contraceptive Technology Update* (Vol. 16, No. 11, pp. 133–136) raise the concern that talc in condoms might be associated with risk for infertility and ovarian cancer. As of this writing, the Food and Drug Administration has stated that all condoms currently being manufactured should use other lubricants such as corn starch. Nevertheless, condoms containing talc may still be in circulation.

Condoms are such an important defense against sexually transmitted infection that no one should be discouraged from using them. You may counsel individuals to purchase and use condoms dated to expire after the year 2000, which will assure that they were manufactured after the removal of talc from the manufacturing process (March 1995). In addition, you may wish to advise that buying condoms from stores that sell large volumes of condoms may also ensure that supplies are as fresh as possible.

Adolescent hepatitis B pilot initiative

Diman Regional Vocational High School in Fall River was chosen for an adolescent hepatitis vaccination pilot initiative because of willingness to participate, high interest of students in health issues, and the risk for students posed by choice of health care as a profession as well as the potential behavioral factors that normally place adolescents at risk for hepatitis B.

MDPH staff worked closely with school staff, in particular health counselor Melissa Baron Cyr and school superintendent Joseph Martins. Letters explaining the project were sent to parents along with information regarding hepatitis B and its risks.

Prior to vaccination, students were required to attend four educational sessions with Lorraine Peavey, RN, of the Division of STD Prevention. Of the 1,100 students in the school, 100 had been previously immunized. The remaining 1,000 were offered the vaccine, to be administered by the New Bedford STD Clinic, under direction of Jackie Roy, Clinic Coordinator. Among the 1,000 students, 644 were immunized on the first round. Three doses of vaccine will be administered with the final dose in April. To date the project has been remarkably successful in recruiting and vaccinating a large percentage of the student body.

STD/HIV Training Center of New England
Course schedule

CLINICAL COURSES

Three-Day STD Intensive

April 8–10; October 21–23; November 18–20

Five-Day STD Intensive

(two are scheduled)
Didactic Sessions May 1 and 22;
On-Site June 24–26
Didactic Sessions September 11 and 25;
On-Site October 7–9

Save the Date!

SATELLITE CONFERENCE
Case Studies in Clinical Management
May 30

LABORATORY COURSES

Brightfield Microscopy
May 9; September 19

Darkfield Microscopy & Syphilis Serology
May 8; November 6

CONFERENCES

Annual Update
December 4

For more information, please contact administrative staff at (617) 983-6945

Regional *Update:* Immunization

Boston

(617) 534-5609

Epidemiologist: Nancy Harrington, MPH **Nurse:** Maryellen Monahan, RN
Admin. Assistant: Jane Hicks

Educational activities

Planning for National Infant Immunization Week, April 21–27, is well underway in Boston. People interested in taking part in the week's activities should call Maryellen Monahan or Priscilla McConnell at 534-5611. Immunization Program staff are available for presentations on many topics related to immunization, such as vaccine-preventable diseases, vaccine updates, storage and handling of vaccines, vaccine administration, and others.

Vaccine notes

The Boston Immunization Program (BIP) is not yet able to distribute varicella vaccine, but providers who want it when it becomes available must have appropriate freezers. A survey done last fall of more than 45 providers who pick up vaccine at the BIP showed that only two had frost-free freezers that could maintain the necessary temperature of −15°C (5°F). If you have purchased a new freezer since the survey, please call and let us know.

Central

(508) 792-7880

Epidemiologist: Jack Bicknell **Nurse:** Pat Reynolds-Caouette, RN
Admin. Assistant: Gail Steele

Morbidity

We recently experienced an outbreak of nine laboratory-confirmed cases of pertussis in a residential facility for the developmentally disabled. The facility instituted aggressive control measures, including prophylaxis of all students (76) and staff with student contact (200). No further cases developed at the facility, although sporadic cases of pertussis are still being seen throughout the region.

Vaccine notes

If you have not yet reported flu vaccine usage, please do so as soon as possible. Future allotments depend on this year's reports.

Educational activities

The Regional Roundtable meeting on immunization will be held April 16, 1996. If you would like to attend, please call us for the location and directions.

Personnel

After 20 years with the Department of Public Health, regional immunization epidemiologist Jack Bicknell will be retiring this July. We will all miss him and would like to take this opportunity to wish him a long, healthy and relaxed retirement.

Metro

(617) 983-6863

Epidemiologist: Lisa Berger, MPH **Nurse:** Peg O'Toole, RN
Admin. Assistant: Carolyn Thames

Morbidity

Pertussis is still a concern in the Metro Region. The most recent outbreak is centered in a public school in Brookline. As of February 23, 1996, thirteen cases were identified: two confirmed by culture, six by serology, and five epidemiologically linked. Ages of cases range from 2 months to 52 years, but most are 12–13 years old. We helped local officials to implement aggressive control measures, including wide-scale prophylaxis, exclusion of symptomatic individuals from the setting, and active surveillance.

Vaccine issues

We are still waiting for flu and pneumococcal vaccine accountability reports. As of mid-February, the Metro Region has accounted for only 70% of flu vaccine and 36% of pneumococcal vaccine. We still have plenty of pneumococcal vaccine available, which can and should be given throughout the year to high-risk individuals.

Educational activities

We will be conducting another Immunization Roundtable on April 11 at the Dedham Town Hall lower level conference room. We intend to review plans for National Infant Immunization Week (April 21–27), discuss outreach being conducted at maternity hospitals, and present recommendations for the new varicella and hepatitis A vaccines. If you have any questions about the Roundtable or would like to be added to the mailing list, please call our office at the number above.

Southeast

(508) 947-1231

Epidemiologist: Edward Pomfred, RN **Nurses:** Joan Thompson-Allen, RN
Admin. Assistant: Debra Marote Sonia Kobrin, RN

Pertussis continues to be a major source of vaccine-preventable morbidity for the Southeast Region, which had 76 laboratory-confirmed cases in 1995—a 25% increase over 1994, when we had 61 cases. Three outbreaks accounted for only 29 cases in 1995; the remaining 47 cases occurred sporadically throughout the region, with no noted clusters.

The 1995 increase should serve as a reminder to providers to seriously consider pertussis when patients present with a cough history of two weeks or more. Waning immunity has been noted approximately 6–8 years after the last pertussis shot. Lab test kits for pertussis are available; please call us for more information.

Regional *Update:* Immunization

Northeast

(508) 851-7261

Epidemiologist: Karen Ogden, RN **Nurse:** Joan Daley, RN
Admin. Assistant: Sheila Sullivan

Morbidity

Sporadic cases of pertussis continue to be seen in the Northeast Region. We have had three cases of disease: two in adolescents and one in a senior citizen. Regional staff are available to perform in-service training on pertussis outbreak control.

Vaccine notes

Kindergarten and day care audits are ongoing in the region. We appreciate the efforts of school nursing staff in keeping accurate and timely immunization records on the children.

Community immunization assessments for Lawrence and Methuen are underway. The Urban Institute of Merrimack College requested these surveys as a result of a conference held last December. During a breakout session with the Prevention Center of Lawrence, conference attendees held a lively discussion of immunization issues within the two communities. The surveys should be completed in April. Results will be used in planning intervention strategies for Lawrence and Methuen.

Vaccine accountability has increased for the region. Thank you for responding to our requests for improved usage reporting.

Practice-based assessments continue throughout the region; call Joan Daley to schedule yours.

Educational activities

Educational materials have been going out as quickly as we get them in. Parent information groups and the many health fairs held throughout the region have been eager to get materials for community distribution.

The next Regional Roundtable is scheduled for April 22; call us at the number above for details.

Western

(413) 545-6600

Epidemiologist: Marija Popstefanija, MD, MPH **Nurse:** Judith Coates, RN
Admin. Assistant: Marilyn Brown

Morbidity

An outbreak of three cases of measles occurred in the Western Region at a private school that boards students from 15 states and five foreign countries. The cases were residents of Vermont, Connecticut and New York, but exposure occurred in Massachusetts. Rash onset dates were January 20, 22 and 23, 1996. Two of the students were IgM measles antibody-positive; the third case refused testing. Outbreak control measures were implemented in the three students' home states. While no new rash illnesses were reported at the school, two family members (a sibling in Vermont and a parent in Connecticut) developed symptoms. We were not able to determine the source of exposure in this outbreak.

Pertussis outbreaks in schools continue to occur in the Western Region. During the last three months, 29 cases have occurred in five different schools.

Vaccine notes

All vaccine providers were notified of the change in packaging of Td vaccine. All vials will now contain 15 doses rather than 10. Please keep this in mind when completing the "Current Inventory" and "Doses Ordered" columns on the vaccine order form.

The Western Region still has an ample supply of pneumococcal vaccine for elderly and other high-risk individuals. This vaccine can be administered year-round, not just during influenza season. Please call us if you want a supply for your patients.

Educational activities

Satellite conferences presented by the Centers for Disease Control and Prevention (CDC) will be scheduled throughout the year. If you have teleconference capabilities, please contact Senior Public Health Advisor Walt Lasota at (617) 983-6834 for information on becoming a downlink site.

Regional *Update:* TB

Northeast Region - TSA III

(508) 851-7261 x50 or (617) 727-7908 x50 **TSA Nurse:** Nancy Taylor Flynn, RN, BSN

Epidemiology

In 1995, 69 cases of TB were diagnosed in TSA III with the highest case rates in Lawrence, Lowell, Lynn and Malden. This region continues to see increases in cases of multidrug-resistant tuberculosis (MDR-TB).

Clinical Services

The TB clinical services previously provided at AtlantiCare Medical Center in Lynn were relocated to Salem Hospital in Salem, in February 1996. Shuttle buses provide transportation from Lynn City Hall to the Salem Hospital clinic on the first and fourth Tuesday mornings of the month. Dr. Peter Shecktman will see Lynn area patients on those days (Lynn, Lynnfield, Nahant, Saugus and Swampscott), while Dr. Kirkpatrick and Associates will continue to provide services on the alternate Tuesdays and Thursdays for the Salem area patients.

Educational Activities

Twenty-eight educational in-services were provided in 1995, primarily at long-term care facilities, hospitals and Visiting Nurse Associations. The TSA nurse and Community Outreach Workers (ORW) participated in a health fair at Tewksbury High School. A half-day program entitled "A Regional TB Update 1996" will be held September 26, 1996; call us for the location.

(Continued on page 7)

Progress made on Massachusetts Immunization Information System (MIIS)

With the installation of telecommunication lines and computer systems, the MIIS now has the infrastructure for a central immunization tracking database. Software applications for maintaining the central database and enabling health care providers to track children's records within their practice and exchange information with the central database are now under development. A vendor has also been engaged to develop applications to exchange immunization information through fax forms and interactive voice response telephone systems.

MIIS staff are working with the Registry of Vital Records and Statistics to obtain birth record data on a regular basis. Additionally, MIIS and WIC staff are developing a method for sharing immunization information with WIC on their child participants and obtaining address information from WIC, which may be used to locate underimmunized children.

Later in 1996, a pilot of the MIIS will begin with the approximately 30 provider sites in the cities of Cambridge, Chelsea, and Somerville. MIIS staff are collaborating with Immunization Action Project staff in those cities to inform providers of the MIIS and solicit their participation.

Those interested in learning more about the MIIS can contact Robert Rosofsky, Director, at (617) 983-6836 or via email at roso100w@wonder.em.cdc.gov.

Massachusetts practices reach goal early

Based on over 100 practice-based assessments conducted in Massachusetts in 1995, we identified 14 practices that have already achieved the national Year 2000 Goal of complete immunization of 90% of children by their second birthday. (At that age, complete immunization consists of four doses of DTP, three polio, three Hib, and one MMR.) These early achievers include group and individual practices at public and private sites throughout the state. The practices will be honored by the Massachusetts Medical Society, the Massachusetts Chapter of the American Academy of Pediatrics, and the Department of Public Health at a reception to be held during National Infant Immunization Week later this month.

Child Health Associates, Auburn
East Cambridge Health Center, Cambridge
Dr. Laurie Grauel, Rehoboth
Liberty Tree Pediatrics, Danvers
Macony Pediatrics, Great Barrington
Manet Community Health Center, Inc., Quincy
Medical West, Springfield
Medical West, Chicopee
Dr. Leo Muido, Duxbury
Dr. Walter J. Murphy, Plymouth
North Shore Pediatrics, Beverly
Pediatric Associates of Northwoods, Taunton
Tri-County Pediatric Associates, Stoughton
Woburn Pediatrics, Woburn

Reporting vaccine adverse events

One of the objectives of the National Childhood Vaccine Injury Prevention Act (NCVIA) of 1986 is to conduct post-licensure surveillance of vaccines. The Act requires vaccine providers to report certain serious adverse events to the Vaccine Adverse Event Reporting System (VAERS). Reportable adverse events are outlined in the Vaccine Injury Table (revised, *Federal Register,* Vol. 6, No. 26, Feb. 8, 1995) and listed in the contraindications section of the manufacturer's package insert.

The Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA), which manage VAERS together, encourage people to report serious or unusual events that are not listed on the Vaccine Injury Table. Currently, adverse events are underreported. Reporting all adverse events is important because it is the only way to identify serious problems that are too rare to be discovered during clinical trials. Reporting is also an important tool for monitoring vaccine lots, which can be pulled from the market if problems are identified. Stringent manufacturing regulations make it unlikely that a vaccine lot would need to be pulled, however.

While NCVIA eases the burden of vaccine-related lawsuits against manufacturers and providers, it does include recording, reporting and counseling requirements. Health care providers must supply recipients with the appropriate *Vaccine Information Materials,* which give recipients infomation about the risks and benefits of vaccines so they can make an informed decision. The provider must also record specific vaccine-related information in the recipient's medical record, report adverse events to VAERS, and give the recipient information on how to file a claim with the Vaccine Injury Compensation Program.

VAERS forms can be copied from the Physician's Desk Reference or the FDA Drug Bulletin. You can also obtain a supply by calling the Massachusetts Immunization Program (MIP) at (617) 983-6800, or by calling VAERS directly at (800) 222-7967. For copies of other materials referred to in this article, call the MIP.

Send completed VAERS forms to the appropriate address:

Boards of health and VNAs only:
Commonwealth of Massachusetts
Center for Disease Control
305 South Street
Jamaica Plain, MA 02130

All other providers:
VAERS
c/o ERC BioSevices Division
A Division of Ogden BioMedical Services Group
1055 First Street
Rockville, MD 20850

TB *Update*

One-day laboratory diagnosis of TB is here—almost!

Advances in molecular biology, especially the development of nucleic acid hybridization (genetic probes), polymerase chain reaction (PCR) and restriction fragment length polymorphism (RFLP) analyses, have affected the diagnosis and epidemiologic tracking of tuberculosis. About five years ago, genetic probes became available commercially that cut in half the time required to identify *M. tuberculosis, M. avium,* and *M. intercelluare* in culture. The Mycobacteriology Laboratory of the Massachusetts State Laboratory Institute was among the earliest to begin using this technology. While this seemed like a major advance in a field still dependent on century-old diagnostic techniques, the technique added to the operating cost and work load of the laboratory, and public health benefits were difficult to demonstrate. A survey of early experience with genetic probe of cultures showed that almost all TB suspect cases had been placed on therapy on the basis of clinical data well before the pathogen was identified, and virtually no one ultimately found to have *M. avium* or *M. intercelluare* was being treated for TB pending culture results. The addition of rapid, automated, liquid culture systems to genetic probe identification further shortened time to diagnosis to as little as 7 days, but the public health impact of these advances also remains uncertain.

Recently the FDA approved the first of a new generation of commercial, amplification-based, diagnostic kits which allow *direct* (i.e., without culture) identification of *M. tuberculosis*, but only on AFB *smear-positive* sputum specimens. Several other new, one-day tests for TB are being evaluated. In clinical field trials the sensitivity and specificity of the approved and about-to-be approved tests are extremely high (95–100% compared to cultures) when used on *smear-positive* specimens. However, a positive smear and clinical findings remain highly predictive of TB in patients at risk for TB, and it is in *smear-negative* cases that speed and greater sensitivity from PCR would have greatest clinical, public health, and laboratory impact. Moreover, although the tests are highly specific for TB, under the low prevalence conditions existing in Massachusetts and many other areas of the United States, using the tests on smear-negative specimens will identify relatively few true TB cases among predicted false positive results. Once again, because smears and cultures will continue to be required, laboratory cost and labor are additive.

In high-prevalence countries TB cultures are often not available, and the diagnosis of TB rests on clinical findings, acid-fast smears and/or chest x-rays. The new rapid tests should be useful under these conditions, and may be technically feasible, but are cost-prohibitive. These were the general sentiments expressed at a recent conference on the new, rapid diagnostic tests for TB sponsored by the University of San Diego School of Medicine and the American Thoracic Society. Despite reservations about currently available technology, there was great enthusiasm for continued progress toward tests with sufficient predictive value to replace mycobacterial smear and culture. Smear and culture are tests that have served us well, but are no longer adequate as we move into the next century.

TB regional update

(Continued from page 5)

Community Outreach Worker Activities

ORWs for TSA III include Carmen Gorman (Lowell, Lawrence) and Antonio Ramos (covers the entire TSA III area), who are both fluent in Spanish. A new ORW, Bill Wong will primarily reach out to the Chinese population of Malden.

MDR-TB requires longer treatment regimens and more intensive follow-up. Carmen Gorman has been following several cases of MDR-TB and their contacts, providing Directly Observed Therapy (DOT) in the field, and using incentives and enablers to help improve adherence to therapy.

Save the dates!

April 21–27: **National Infant Immunization Week**

May 1: **Influenza Prevention '96**
Strategies & Expectations
9 a.m.–3 p.m., Crowne Plaza Hotel, Natick
Sponsored by MassPRO
Call (617) 890-0011, x216 for more information

Personnel

Alexander Slutsky, PhD

The Mycobacteriology Laboratory welcomes the new Assistant Director, Alexander Slutsky, PhD. Dr. Slutsky has a PhD in Genetics of Microorganisms from the Institute of Genetics of Microorganisms of Moscow State University. He was a Postdoctoral Fellow in Clinical and Public Health Microbiology at the University of Rochester Medical Center, Rochester, N.Y. and a Postdoctoral Associate in the Department of Biology at the Massachusetts Institute of Technology. He is the author of numerous articles in the field and until recently worked at Myco Pharmaceuticals Inc. in Cambridge.

Kathleen Hursen, RN, MS

The Division of Tuberculosis Prevention and Control welcomes the new Director of Education and Training, Kathleen Hursen, RN, MS. Ms. Hursen has a master's degree in Nursing Management and Administration from the University of Massachusetts Medical Center, Graduate School of Nursing in Worcester. She comes to us from the Framingham Board of Health where she coordinated the regional TB clinic. Please feel free to call her at (617) 983-6974 for inquiries into educational training programs and publications.

Communicable Disease *Updates* : 1994 vs 1995 Reported Cases

DISEASE	1994	1995*	change	DISEASE	1994	1995*	change
AIDS	1189	898	—	Measles	7	6	-14%
Botulism	0	1	—	Meningitis (*Neisseria*)	47	25	-47%
Campylobacter	1833	1570	-14%	Pertussis	534	472	-12%
Chlamydia	8049	7402	-8%	Rabies (animal)	734	401	-45%
Cryptosporidiosis	10	127	—	Rubella	126	11	-91%
E. coli O157:H7	134	117	-13%	CRS**	2	0	—
Giardiasis	1044	999	-4%	Salmonellosis	2009	1861	-7%
Gonorrhea	3156	2658	-16%	*S. typhi* (Typhoid)	20	31	+55%
Hepatitis A	112	153	+37%	Shigellosis	243	324	+33%
Hepatitis B (acute)	200	107	-47%	Syphilis (early)	287	69	-76%
Lyme disease	247	213	-14%	TB	329	330	+<1%

* Preliminary data. Reporting not yet complete.

** Congenital Rubella Syndrome

Protect kindergartners against hepatitis B

Starting September 1996, children must have three doses of hepatitis B vaccine to enter kindergarten if they were born on or after January 1, 1992. Hepatitis B vaccine is also recommended and is available for older children entering kindergarten in 1996.

COMMUNICABLE DISEASE *UPDATE*
STATE LABORATORY INSTITUTE
305 SOUTH ST.
BOSTON, MA 02130

SEND TO:

You be the Epi!

A school nurse reports that a second grader was absent because her older sister allegedly was brought to the hospital the night before with meningitis. The nurse at the older sister's school had heard the same unconfirmed rumor. The family could not be reached. She is unsure of what to do but provides you with the names of the two children. On calling the local hospital you learn that the 14-year-old sister has been diagnosed with meningococcal meningitis based on symptoms and the presence of gram negative diplococci on CSF gram stain. How should you proceed?

Analysis

Meningococcal meningitis is a serious illness that occurs when the bacteria *Neisseria meningitidis* infect the membranes surrounding the brain and spinal cord. This invasive form of meningococcal illness is rare, but many people can be carriers who normally have these bacteria in their noses and throats without being sick. Both sick persons and carriers can spread these bacteria to others. When a case of meningococcal meningitis is diagnosed, close contacts of the sick individual should be advised to take appropriate antibiotics to protect them from invasive infection. While no action needs to be taken at the younger child's school, you need to work closely with the family and the 14-year-old's school to identify close contacts who would need treatment. Close contacts would include anyone who may have come into contact with the sick girl's saliva or respiratory secretions, such as household contacts and any friends who shared eating and drinking utensils with her. Ask about romantic partners, sports teams, and other extracurricular activities where food, drink or even cigarettes could have been shared in the two weeks before she became ill. Because there is often a great deal of anxiety when these illnesses occur, you should be prepared to provide information about the number of cases, the symptoms and recommended precautions.

M ASS. HS 30.1703: 4/3

For Healthier Lives

Massachusetts Department of Public Health

Communicable Disease Update

Newsletter of the Bureau of Communicable Disease Control

Volume 4 Issue 3 July 1996

GOVERNMENT DOCUMENTS
COLLECTION
NOV 4 1996
University of Massachusetts
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Future directions: defining the essential components of tuberculosis control

Health care delivery is being redefined in the United States. How public health programs will fit into the new order of managed care, for-profit hospitals, and public health block grants is unclear. The clearest demonstration of the importance of public health programs is the resurgence of drug-resistant tuberculosis in the United States. Although HIV infection, homelessness, and other social problems contributed to the increased TB case rates, deterioration of effective tuberculosis control programs in New York City and many other areas of the country were equally important factors, especially in producing drug-resistant cases. Indeed, with effective public health TB control efforts re-established in New York City, TB case rates are now falling rapidly while AIDS and homelessness persist.

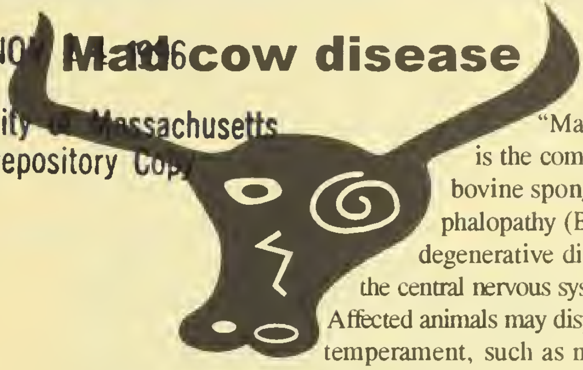
(Continued on page 7)

New chlamydia test

Starting July 1, 1996, all state-supported STD clinics began using a new testing method for the detection of *Chlamydia trachomatis.* The new method, the Ligase Chain Reaction (LCR), uses the LCX probe system supported by Abbott Laboratories. Specimens from female endocervical and male urethral swabs are the test samples. The exciting new feature of this DNA technology is that only one to five organisms are needed for positive identification. People with chlamydia who have too few organisms for detection by previous tests will now test positive. With amplified DNA probe technology, sensitivity of 96% has been reported (*i.e.,* 96% of those infected will test positive).

Chlamydia infection is asymptomatic in many who contract it, both male and female. With this new test, many of those individuals can now be diagnosed and treated. Another advantage of this technology is that labs will be able to test two to three times a week rather than once weekly batch-testing. This new test will allow expanded chlamydia testing for men in the STD clinics. We hope to initiate expanded testing in the fall.

Mad cow disease



"Mad cow disease" is the common name for bovine spongiform encephalopathy (BSE), a chronic degenerative disease affecting the central nervous system of cattle. Affected animals may display changes in temperament, such as nervousness and aggression, abnormal posture and lack of coordination. The incubation period is thought to be from two to eight years.

The disease was first seen in Great Britain in 1986. Since then, the British have implemented control measures to reduce the incidence of this serious disease in cattle and to prevent potentially infected materials from entering the food chain. British cattle are thought to have become infected by eating rendered cow and sheep byproducts in their feed in the early 1980s, when the rendering process was changed.

BSE belongs to a group of related diseases known as transmissible spongiform encephalopathies. The group includes scrapie and other diseases that affect animals; and kuru, Creutzfelt-Jacob disease (CJD) and others that affect humans. Speculation about a possible link between BSE and CJD has been based on the recent identification of a previously unrecognized pattern of CJD in ten British cases. This variant form of CJD occurred in people averaging 27.5 years old, compared to the average age of 63 among classical CJD cases. The variant form of the illness lasts 13 months, versus the classical CJD duration of about six months, and brain specimens are histologically distinct from classical CJD. Some studies have linked BSE to CJD, and researchers continue to study this potential association.

To prevent BSE from entering the U.S. and affecting livestock here, the importation of live ruminants and ruminant products from countries where BSE exists has been banned since 1989. A ban on using protein from rendered animal parts in livestock feed is currently under consideration. No cases of BSE have been seen in this country.

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Epidemiology Update

Summer Safety Page

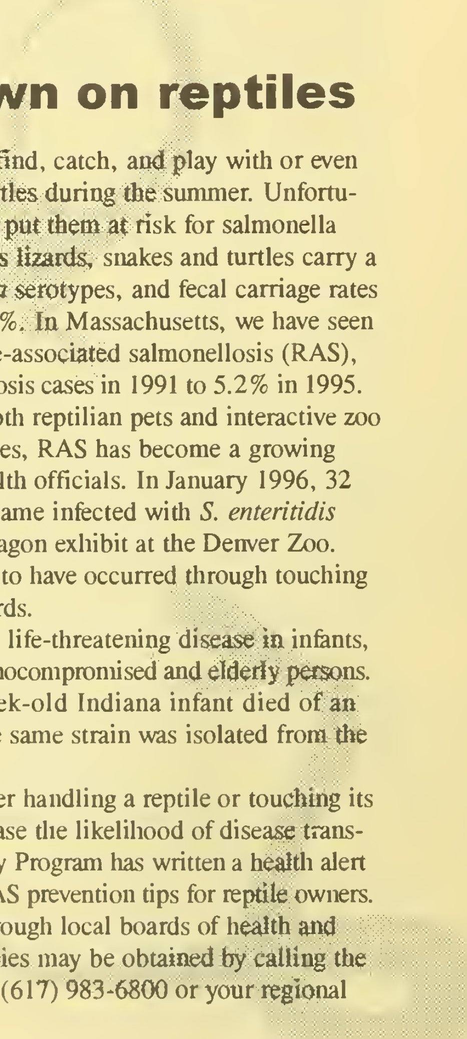
The buzz on bug-borne diseases

Some serious diseases are carried by insects and transmitted to people when the insects bite them. Eastern equine encephalitis (EEE), a rare disease, is carried by some mosquitos. Some ticks can transmit Lyme disease, Rocky Mountain spotted fever, babesiosis and human granulocytic ehrlichiosis. Many of these diseases start with a rash or flu-like symptoms. Mosquitos need water to breed, so they will be found in greater numbers near standing water like swamps or wading pools. Ticks usually live in areas with long grass or bushes, such as dunes, woods or back yards.

Reduce your exposure to ticks and mosquitos!

- Wear a long-sleeved shirt, long pants and closed shoes if you are in tick or mosquito habitat. Tuck your pants into your socks. Light-colored clothing will make dark brown ticks easier to see and remove before they can attach to your skin.
- Use insect repellents containing DEET or permethrin. Repellents with no more than 10–15% DEET should be used for children, and no more than 30–35% for adults. Repellents with permethrin can only be used on clothing, and should never be used on infants' clothing or directly on anyone's skin.
- Do frequent "tick checks" when in tick habitat or after coming indoors. Some ticks are tiny, so look for new dark brown "freckles."
- Remove an attached tick by gripping its mouthparts nearest your skin with tweezers and pulling straight out. Use steady pressure and make sure you remove the entire tick.
- Make sure all door and window screens on your house are well-maintained.

The rundown on reptiles



Many children like to find, catch, and play with or even bring home snakes and turtles during the summer. Unfortunately, these activities can put them at risk for salmonella infections. Reptiles such as lizards, snakes and turtles carry a wide variety of *Salmonella* serotypes, and fecal carriage rates can be as high as 84%–94%. In Massachusetts, we have seen a steady increase in reptile-associated salmonellosis (RAS), from 0.8% of all salmonellosis cases in 1991 to 5.2% in 1995.

As the popularity of both reptilian pets and interactive zoo displays of reptiles increases, RAS has become a growing concern among public health officials. In January 1996, 32 children and one adult became infected with *S. enteritidis* after visiting a komodo dragon exhibit at the Denver Zoo. Transmission is suspected to have occurred through touching the enclosure, not the lizards.

Salmonellosis can be a life-threatening disease in infants, young children, and immunocompromised and elderly persons. In October 1995, a 3-week-old Indiana infant died of an infection of *S. poona*. The same strain was isolated from the family's pet iguana.

Strict handwashing after handling a reptile or touching its environment should decrease the likelihood of disease transmission. The Epidemiology Program has written a health alert including this and other RAS prevention tips for reptile owners. The alert is distributed through local boards of health and health care providers. Copies may be obtained by calling the Epidemiology Program at (617) 983-6800 or your regional immunization office.

The pitfalls of picnics

Picnic time is here, and it's especially welcome after this year's interminable winter. As pleasant as the warm, sunny weather may seem as you relax at the local park or beach, disease-causing microorganisms may be flourishing in your food. *Salmonella* and *E. coli* O157:H7 are two of the more well-known bacteria capable of causing foodborne illness. Many others exist, most of which can multiply quickly at summertime temperatures.

Because the picnic environment is less controlled than your kitchen, keeping cold foods cold and hot foods hot can be a challenge. In addition, lowered levels of sanitation outside the home can facilitate the contamination of foods and beverages. Following the simple guidelines below will help reduce your chances of contracting a foodborne illness.

- **Clean hands thoroughly** with soap and water or disposable hand wipes before and after preparing food *and* after using the bathroom.
- Do not prepare food for others if you are ill.
- Prepare foods close to serving time.
- Store perishable foods in a cooler with ice or cold packs, ideally at 40°F or below. Keep coolers out of direct sunlight.
- Cook meats thoroughly, ideally to an internal temperature of 160°F or above. Keep hot foods hot (140°F or above).
- Sanitize all dishes and utensils used for preparing raw foods prior to using them for other foods. Discard used marinades and sauces.

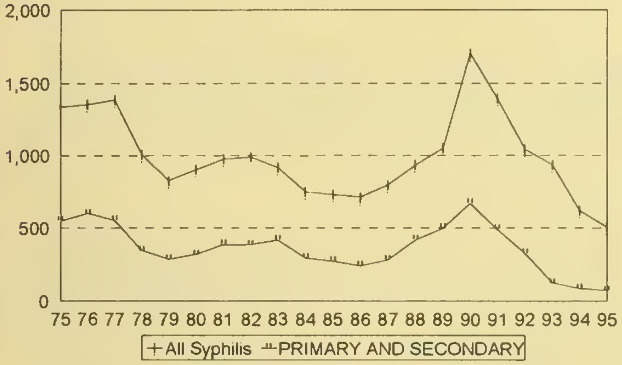
These guidelines were provided in part by the USDA, which offers a meat and poultry hotline at 1-800-535-4555. For current recorded advisories on unsafe shellfish harvesting areas, call (508) 465-5947.

STD Update

Is syphilis eradication a possibility?

In the 1995 Annual STD Report, the STD Prevention Division noted dramatic decreases in reported syphilis over the past five years in Massachusetts. These decreases follow an increase in the late eighties that was associated with increased crack and other cocaine abuse. Statewide trends for the past five years show significant decreases in incidence at all stages of syphilis. The 508 syphilis cases of all stages reported in 1995 are the lowest annual total since syphilis reporting began in 1918. The chart below displays 20 years of reported syphilis.

Massachusetts Reported Syphilis
All Syphilis vs Primary and Secondary



Overall rates of syphilis declined 71% from 28 cases per 100,000 population in 1990 to 8 cases per 100,000 population in 1995. Of greater significance is the decline of lesion (infectious) syphilis (primary and secondary), which declined 90% from 11.6 cases per 100,000 population in 1990 to 1.1 cases per 100,000 population in 1995, falling 78% below the *Healthy People 2000* objective of 5 cases per 100,000.

One might conclude that sufficient progress has been made in reducing reported syphilis in Massachusetts to begin reallocating resources to other programmatic needs in STD prevention. Infertility prevention, for example, would benefit by more intensive chlamydia and gonorrhea disease interventions. However, one of the problems with resource shifting is that it may contribute to resurgence of the disease that is currently under control.

The historic low incidence of infectious syphilis in Massachusetts provides a real opportunity to move from syphilis prevention to syphilis eradication. The Division of STD Prevention is now considering an intensive, multiple-focus syphilis eradication program.

STD/HIV Prevention Training Center of New England

The Prevention Training Center offers clinical and laboratory courses for health care providers involved in the clinical management of STDs. The clinical courses are designed to provide hands-on training in the diagnosis, management and treatment of STDs and associated syndromes. The three-day STD Intensive Clinical Course (24 hours on-site) is designed to provide an update of basic STD knowledge and patient management in ambulatory care settings. This training includes a clinic-based practicum, discussion of case studies, specimen collection, and a laboratory workshop on wet mounts and gram stains. The five-day clinical course is designed to provide more in-depth theoretical knowledge including the management of complications. The training includes two days of presentations followed by a clinical practicum including case studies and a laboratory session. Laboratory courses have also been designed for technicians and clinicians performing stat testing for diagnosis of sexually transmitted diseases.

Courses are available on the dates below.

- Three-Day STD Intensives: Oct. 21–3; Nov. 18–20
- Five-Day STD Intensive: Sept. 11, 25, Oct. 7–9
- Laboratory: Wet mounts and stained smears, Sept. 19
  Syphilis serology and darkfield microscopy, Nov. 6

For further information on programs and registration, please call Renee Aird at (617) 983-6953 or Wendy Hylton at (617) 983-6945.

Feedback requested on STD materials

We would like to receive feedback from interested parties on the following printed materials currently being developed.

- A **brochure for teens** is being developed as part of the "What's Your Story?" project, in which we asked teens to tell personal stories about taking care of their health and preventing diseases. The brochure will publish quotes from these stories. If you work with teens who would like to review the brochure, please call Christie Burke at (617) 983-6959 to make arrangements.
- The **morbidity card** used for reporting STDs to the Division is being revised to make it more user friendly. If you have any thoughts on how the form could be improved, please call Ed Corkren at (617) 983-6949.

Regional Update: TB

Southeast Region - TSA V (617) 727-1440 or (508) 947-1231 **TSA Nurse:** Anne Empey, RN **TSA Clerk:** Anne Bernard

Epidemiology

There were 44 cases of active TB diagnosed in TSA V in 1995. The cities of New Bedford, Quincy, and Attleboro had the highest case counts.

Clinical Services

Martha's Vineyard now has a satellite clinic located at the Visiting Nurse Services. The patients are under the medical supervision of Chet Mohr, MD, at the Cape Cod Clinic. A change in TSA boundaries this year has resulted in the Massachusetts Respiratory Clinic in Braintree now being included in this TSA.

Educational Activities

Twenty-five educational inservices were provided this past year for long-term care facilities, community nursing agencies, and hospitals. The staff also participated in a health fair, organized by nursing students from UMass/Dartmouth, at an extended care and assisted living facility on the Cape. A program entitled "Regional TB Update 1996" for community health departments and providers was conducted by the Division in May at the Paul Dever School in Taunton.

Community Outreach Activities

Xue Zhi Sun is a part-time outreach worker (ORW) for the Chinese community in Quincy; Leandro Fortes is a part-time Cape Verdean ORW who serves the Brockton area. Both provide directly observed therapy, supervision of medications in the field, and incentives and enablers (such as money for food or transportation) to assist patients in successfully completing their TB treatment.

Communicable Disease Update is a quarterly publication of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health.
David H. Mulligan, Commissioner

For a free subscription, please call Debra Thimas at (617) 983-6800.

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Task force reorganized

Is now Massachusetts Immunization Action Partnership

In an effort to enhance and coordinate immunization activities, the Massachusetts Immunization Task Force has reorganized under a new name: the **Massachusetts Immunization Action Partnership** (MIAP). The MIAP has set up three subcommittees (Policy and Practices, Immunization Information Systems, and Outreach and Recruitment) to achieve the goals of the partnership's new mission statement: to increase immunization levels and eliminate vaccine-preventable diseases by promoting, coordinating and enhancing public and private strategies, actions and resources for immunizing the Massachusetts community, especially children.

Individuals or groups involved in immunization activities are enthusiastically invited to join the MIAP. For more information, please contact Jean Franzini at (617) 983-6850.

Save the dates!

September 19:
Immunization Update 2, CDC satellite training course. Call Jean Franzini at (617) 983-6850 for information.
December 4:
Annual STD Update Synopsis; location to be announced.

Regional Update: Immunization

The immunization epidemiologists in each of the regional offices and at the State Laboratory Institute provide these services:

Education and Consultation
- Offer educational programs for general and professional audiences
- Participate in special activities such as regional coalitions

Adult Immunizations
- Promote adult immunizations, including influenza and pneumococcal vaccines
- Provide guidance during institutional outbreaks of vaccine-preventable diseases

Immunization Surveys
- Conduct validation audits of immunization records in schools and day care programs
- Provide consultation on immunization requirements and accurate record-keeping

Adverse Events
- Monitor post-immunization adverse events clinics run by boards of health and VNAs
- Advise other providers about adverse events and VAERS reporting requirements

Outbreak Control
- Work with health care providers to control transmission of vaccine-preventable diseases in clinics, hospitals, schools and other institutional settings
- Coordinate with local boards of health to control disease transmission in the community
- Offer guidance on emergency immunization clinics
- Assist providers in follow-up of infants at high risk for hepatitis B

Surveillance and Analysis
- Develop and maintain surveillance systems with local boards of health, hospitals, nursing homes, schools, and sentinel sites.
- Analyze morbidity data to identify trends

Vaccine Distribution and Management
- Assist with provider enrollment in the Vaccines for Children (VFC) Program
- Provide technical advice on the proper storage and handling of vaccines and record-keeping requirements

You be the epi!

A 28-year-old male presents with fever, weight loss, and night sweats. The patient denies alcohol or drug abuse, but the physician suspects IV drug use. He also has a history of incarceration in New York. The patient may be immune-compromised and was on suicide precautions in the hospital, which he attempted to leave against medical advice. Biopsy and cultures confirm drug-sensitive lymphatic (mediastinal) TB. The patient is started on four antituberculosis medications: isoniazid (INH), rifampin (RIF), pyrazinamide (PZA), and ethambutol (EMB). How would you manage this case?

Analysis

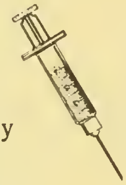
The patient was placed on directly observed therapy (DOT) seven times a week due to a strong potential for nonadherence. Outreach services were not requested. Later, the nurse case manager decided to provide DOT only twice a week with the patient self-administering the remaining doses because he appeared to be adherent. After eight months of treatment with three medications (PZA was stopped at three months), EMB was discontinued. The patient subsequently developed pulmonary symptoms and positive cultures (sputum and a cervical lymph node biopsy) for *Mycobacterium tuberculosis,* indicating treatment failure and possible nonadherence.

A case conference was held during which rifampin resistance was noted. The patient agreed to a voluntary admission to the TB Treatment Unit, but signed out against medical advice after several days. The patient was started on three new drugs (EMB, ofloxacin, and streptomycin injections) and was placed on DOT seven days a week. Contact investigation revealed two out of five close contacts developed positive PPD skin tests. Chest radiographs were negative and the contacts were placed on INH preventive therapy for six months.

Providing DOT for all doses needed by a person with risk factors for nonadherence can prevent drug resistance and the infection of contacts, and assure treatment completion within six months. Outreach services are often available to assist health departments with DOT. When the culture remains positive after several months of treatment, the patient must be reevaluated and started on at least two new drugs.

Immunization Update

Kudos to school nurses



Over 250 communities across the state have requested information about the adolescent hepatitis B project. The response to this voluntary program is heartening. Many schools, under the leadership of school nurses, have started immunizing students and educating parents, students, faculty and administration about hepatitis B prevention.

"Taking advantage of this opportunity is no easy task, but this is good work!" one school nurse commented. School nurses have been the motivating force in many of the 180 communities that participated in the program this past school year. More schools are planning to implement the program next year. The motivation and effort on the part of many school nurses are commendable. Their enthusiasm has been infectious. Schools with minimal or no health facilities, but a high degree of motivation, have been able to implement the program through collaboration with visiting nurse associations, community medical facilities and local boards of health.

The adolescent hepatitis B project in Massachusetts began in November 1995. Its goal is to prevent hepatitis B by immunizing sixth graders. The Massachusetts Immunization Program provides hepatitis B vaccine to health care providers, boards of health and schools. Immunization of adolescents is expected to result in a more rapid decline in the incidence of hepatitis B infection. The strategy in choosing this age group is to protect adolescents before they are exposed to the virus through high-risk behavior.

Coming soon: varicella vaccine

The CDC recently negotiated a contract for the purchase of varicella vaccine, which the Massachusetts Immunization Program (MIP) expects to provide in the near future. However, varicella vaccine will **not** be available through local distributors; providers will place orders with the MIP by mail or fax, and the manufacturer will ship directly.

If you are interested in ordering varicella vaccine through the MIP you must complete and return the varicella response card labeled **"Yes, I want varicella vaccine!"** as soon as possible. If you have lost or did not receive this response card, please call your regional MIP office immediately. Only respondents who have documented adequate storage capacity will be sent a Varicella Order Form and Usage Report along with instructions on how to order free varicella vaccine through the MIP.

Pending final Advisory Committee on Immunization Practices (ACIP) recommendations, the MIP will make the vaccine available to all healthy children 12–18 months old, susceptible children 11 or 12 years old (only one age group will be chosen), and household contacts of people with compromised immune systems.

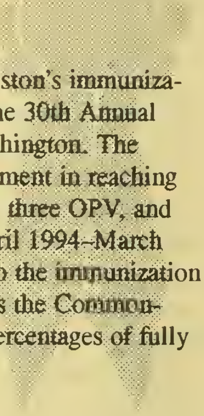
Hepatitis B needle tips

One challenge in administering hepatitis B vaccine is having two different formulations requiring different doses in similar populations. The Massachusetts Immunization Program (MIP) supplies both Recommbivax HB and Energix-B unter the current federal contract. Therefore, before you draw up a dose or inject a patient, check these points.

- ➤ **Always check the package insert.**
- ➤ **Always** administer the dose recommended by the manufacturer for your patient's age. Different formulations contain different concentrations of vaccine.
- ➤ **Never** rely on the cap or label color to determine the dose.
- ➤ **Never** base the dose on volume alone. Different amounts are needed for different formulations.

Using the correct needle length is also important to ensure that the vaccine is injected into the patient's muscle. Use a $^5/_8$–1″ needle for infants and toddlers, and a 1–$1\frac{1}{2}$″ needle for adolescents and adults.

State & city receive awards



Both Massachusetts and the City of Boston's immunization programs were presented plaques at the 30th Annual National Immunization Conference in Washington. The plaques recognized "extraordinary achievement in reaching 85% immunization coverage for four DTP, three OPV, and one MMR among 2-year-old children, April 1994–March 1995." While the awards were presented to the immunization programs, it is health care providers across the Commonwealth who are responsible for our high percentages of fully immunized children.

Get ready for school

Beginning in September 1996, three doses of hepatitis B vaccine are required for entry into kindergarten for children born on or since January 1, 1992. Although hepatitis B immunization is not required for children born before 1992 who will be entering kindergarten this fall, the Massachusetts Immunization Program also provides the vaccine for children in this age group.

And remember, two doses of measles-containing vaccine and one dose each of mumps and rubella vaccine are required for anyone entering kindergarten, seventh grade, or college. The combined MMR formulation is recommended for both doses of measles vaccine.

Future directions of tuberculosis control

(Continued from page 1)

Whenever public health problems improve, it is tempting to cut program funding. Programs get merged in the name of efficiency, or case management is relinquished to private sector medicine. Tuberculosis in Massachusetts has declined for four straight years. Case rates are now the lowest ever recorded. Yet, among high risk groups (recent arrivals from high-prevalence countries, homeless people, HIV-infected individuals, and health care workers) tuberculosis is far from a disease of the past. Moreover, inadequacies in TB control programs continue to foster the development of drug-resistant disease and transmission to others. (Turn to "You be the epi!" on page 5 for an example.)

Because the future of tuberculosis control programs is unclear, it is critical to identify essential components. Regardless of changes in the health care system, effective tuberculosis control will be maintained only if planners understand that the six essential components described below are essential.

Essential components of TB control

1. **Provider responsibility:** In most personal medical care, providers are not responsible for patient adherence to treatment. But when a patient fails tuberculosis therapy, potentially developing a drug-resistant strain, the failure is as much the treatment provider's responsibility as it is the patient's. Providers accustomed to other forms of health care delivery must accept responsibility for ensuring that their patients adhere to the lengthy treatment.
2. **Close monitoring of therapy until cure:** Monthly or more frequent visits are essential. Community outreach and twice-weekly directly observed therapy (DOT) are active forms of monitoring that further support adherence to treatment. Private sector health care systems may have limited outreach capability for monitoring and DOT. These providers must be willing to accommodate monthly visits—without fees that would discourage compliance.
3. **Removal of barriers to treatment.** Tuberculosis treatment until cured is in the interest of the public as well as the individual. Financial, transportation, language, cultural, and educational barriers must be removed. Appointments must accommodate the patients' working schedules and other personal needs, including safety and transportation.
4. **Tools to enhance adherence.** A number of effective tools have been developed to support adherence to treatment. Contracts between patient and provider, pill counts, daily pill boxes, urine tests for isoniazid, fixed-dose combination pills, and patient performance incentives have all been used with success in various TB control settings.
5. **Contact tracing and preventive treatment**. For each new active TB case, close contacts must be identified, tested, and if infected, evaluated for active TB and preventive therapy. This usually requires community outreach. Barriers to preventive therapy must be minimized for asymptomatic patients, who may not see treatment as a high priority.
6. **Program assessment and response**. Program performance has now become an essential part of most health care delivery systems. The difference is that effectiveness must be assessed from a public health perspective, rather than from a financial or client satisfaction perspective. Many aspects of TB control may not be cost-efficient and are likely to become more inefficient as case rates fall.

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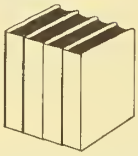
Book review: *At War Within: The Double-Edged Sword of Immunity—*

William R. Clark



"The immune system can provide a powerful defense against potential pathogens, but perhaps less obvious is its capability of bringing too much power to bear during the course of clearing away foreign invaders." This excerpt from the introduction of *At War Within: The Double Edged Sword of Immunity* by immunologist William Clark is a powerful statement on the dual nature of the immune system. This comprehensive book initially reviews the history of smallpox vaccination, including early Chinese procedures of inhaling dried powdered scabs and the later Turkish procedure of rubbing them into scratches on the skin, referred to as inoculation. The physiology of the immune system is comprehensively reviewed. Autoimmune disorders (those in which the immune system turns on itself) such as lupus, myasthenia gravis, and autoimmune hepatitis are presented, along with hypersensitivity and allergic reactions. The author also discusses severe combined immunodeficiency disease (SCID), in which the immune system fails at birth or shortly thereafter. A subsequent chapter devoted to the immunology of AIDS includes a discussion of vaccine and drug treatments. Dr. Clark explores organ transplantation with its immunological and ethical dilemmas and concludes the book with a provocative chapter on the link between the brain and the immune system.

COMMUNICABLE DISEASE UPDATE
STATE LABORATORY INSTITUTE
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What do you think of *Communicable Disease Update?*

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1. What section(s) of the newsletter do you usually read? (✓ all that apply)

☐ Front page
☐ Epidemiology Update
☐ Immunization Update
☐ STD Update
☐ TB Update
☐ You be the epi
☐ Regional Updates
☐ Save the dates
☐ Book reviews

2. In general, how do you rate the information in each section?
(1=very informative or useful, 2=moderately, 3=a little, 4=not at all informative or useful)

___ Front page
___ Epidemiology Update
___ Immunization Update
___ STD Update
___ TB Update
___ You be the epi
___ Regional Updates
___ Save the dates
___ Book reviews

3. What changes would you like to see in the newsletter? Any other comments?

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For Healthier Lives

Massachusetts Department of Public Health

Communicable Disease Update

Newsletter of the Bureau of Communicable Disease Control

Volume 4 Issue 4 October 1996

GOVERNMENT DOCUMENTS COLLECTION

JAN 31 1997

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Screening kids for TB—new recommendations

Since 1992, the case rate of tuberculosis in Massachusetts has declined by 25%. Due in part to this declining case rate, the Massachusetts Department of Public Health (MDPH) has issued changes to the TB skin test guidelines. Previously, the MDPH recommended that all children be routinely skin tested for TB by the age of five, or before entering the school system. Also, while the MDPH strongly recommended the Mantoux (5TU-Intermediate PPD) test, the health care provider selected the type of skin test used. Now, for the reasons described below, these recommendations have changed. The Medical Advisory Board of the Massachusetts Committee for the Elimination of Tuberculosis has produced new skin testing recommendations. The skin testing guidelines from the Centers for Disease Control and Prevention (CDC) and the American Academy of Pediatrics (AAP) form the basis for these recommendations. Implementing these changes will align Massachusetts policy with the CDC and the AAP.

1. **Use ONLY the Mantoux test. Discontinue multiple puncture tests (MPTs) because:**

- The Mantoux test is more accurate than MPT tests (TINE and Monovacc), which produce large numbers of both false negative and false positive results.
- Massachusetts has a low prevalence of TB infection; consequently there is a higher probability of positive MPT test results being false positive.
- False negative results in high-risk children may lead to serious consequences.
- Parents often interpret MPT test results incorrectly.

continued on page 7

New condom design

FDA approval is being sought for a new type of nonlatex condom that unrolls in either direction. This feature is expected to reduce the chances of placing the condom on the wrong way and contaminating the outside with semen before use. While experience with this new design is limited, it could overcome some of the reasons that traditional condoms are either not used or used incorrectly. The manufacturer claims that it is easier to put on than traditional condoms, and fits more loosely, thereby allowing greater sensation. Ease of use—even in the dark—may also help promote condom use by reducing embarrassment. This nonlatex condom, called PolyMAXX, may be on the market within the next couple of years.

Rabies warning for travelers

A 32-year-old New Hampshire woman died of rabies in August at Massachusetts General Hospital. The woman was bitten by a stray dog in June 1996 while traveling in Nepal. She sought medical advice, obtained conflicting information, and did not receive rabies postexposure treatment.

This is the second case of human rabies reported in the United States during 1996. The first was reported in Florida and also implicated a variant of the virus associated with rabid dogs, from exposure near the Mexico/Guatemala border. Canine rabies remains a human public health threat in many developing countries. Twelve (40%) of 30 human cases of rabies reported in the U.S. since 1980 were acquired outside of the country and were associated with dog variant rabies viruses.

Preexposure rabies vaccination should be offered to persons who will be visiting for more than 30 days, or are planning to reside in foreign countries where canine rabies is endemic. Travelers are at highest risk in El Salvador, Guatemala, Mexico, Peru, Colombia, Ecuador, India, Nepal, the Philippines, Sri Lanka, Thailand, and Vietnam. Rabies is also found in dogs in other countries of Africa and in Central and South America. The Centers for Disease Control and Prevention advises travelers to avoid contact with dogs and other animals, and rabies preexposure immunization is recommended for persons planning to stay in these areas for 30 days or more. Preexposure vaccination does not eliminate the need for additional therapy after exposure to a potentially rabid animal, but it simplifies the treatment by eliminating the need for rabies immune globulin and by decreasing the number of doses of vaccine required. Rabies biologics may not be readily available in all developing countries.

Persons who are bitten or scratched by any animal should immediately wash the wound for at least ten minutes with soap and water and promptly seek medical attention to evaluate the need for postexposure prophylaxis. For travel health information, call (617) 983-6800, or the CDC travel line at (404) 332-4559, or visit the CDC homepage on the world wide web at http://www.cdc.gov/travel/rabies.htm

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You be the epi! Page 5

Epidemiology Update

Cyclospora

From May through July 1996, 133 laboratory-confirmed cases of *Cyclospora cayetanesis* were reported to the Massachusetts Department of Public Health by laboratories throughout the state. Most of the cases were sporadic, but some were associated with common sources of infection at social events. At the same time, other states and the Canadian province of Ontario were reporting similar increases in sporadic and event-associated cyclospora cases. Preliminary analyses of both sporadic and event-related cases have associated many cases with consumption of raspberries imported from Guatemala. It has not yet been determined how raspberries were contaminated, although it is generally believed to have occurred prior to export. No new cases of cyclospora in Massachusetts have been reported since the end of July.

The first known human cases of cyclospora infection were diagnosed in 1977, and cases have been reported with increasing frequency since the mid-1980s, in part because of better techniques for detecting the parasite in stool. Since cyclospora infection is not yet a reportable disease in Massachusetts, statistics on background levels of infection have not been established. Cyclospora infection occurs after ingestion of food or water contaminated with the infectious form of this parasite. Unlike other organisms, however, cyclospora does not become infectious until days to weeks after it is excreted into stool; therefore, direct person-to-person transmission is unlikely. Transmission can occur when there is contamination of a food product or water source (*e.g.*, raspberries) with exposure occurring later, after the parasite has had time to become infectious.

Cyclospora cayetanesis is a single-cell parasite that can be identified in stool. It infects the small intestine and typically causes an illness characterized by prolonged watery diarrhea. Other symptoms can include loss of appetite, weight loss, bloating, gas, stomach cramps, nausea, vomiting, fatigue, muscle aches, and low-grade fever. Some infected individuals experience no symptoms. The incubation period can range from several days to a week or more. If not treated, the illness may last for a few days to a month or longer and may relapse one or more times. It is not known whether immune-compromised persons experience a more serious illness with this infection.

Cyclospora can be treated with a regimen of sulfa-containing drugs such as trimethoprim-sulfamethoxazole. Treatment regimens for patients who cannot tolerate sulfa have not been identified. Infected persons with diarrhea should rest and drink plenty of fluids. Based on current information about the spread of cyclospora, preventive measures include thorough washing of fresh fruits and vegetables before eating. People infected with cyclospora should thoroughly wash their hands after stooling to prevent the spread of infection and should refrain from food preparation. People who have had cyclospora infection can become reinfected.

New bat booklet

Collaborating state agencies have published a booklet about bats and rabies in Massachusetts. It contains facts about rabies prevention, tips about removing bats from your home, etc. It is a collaborative effort between the Massachusetts Department of Public Health (MDPH), the Massachusetts Department of Food and Agriculture, Bureau of Animal Health and the Massachusetts Division of Fisheries and Wildlife. The booklet, titled *Rabies and Bats in Massachusetts*, is available from the Division of Epidemiology and Immunization, Bureau of Communicable Disease Control, 305 South Street, Jamaica Plain, MA 02130.

Watch your mailbox!

On July 31, Connaught's Tripedia vaccine was licensed for use in infants and children 2 months of age and older. The Massachusetts Immunization Program (MIP) will soon begin providing this combined vaccine containing diphtheria, tetanus, and acellular pertussis vaccines. If you currently use MIP-supplied DTP vaccine, watch your mailbox for important information about Tripedia.

Adolescent school health courses

Day-long educational courses are planned for school nurses, boards of health, VNAs and others involved in implementing school-based adolescent health programs.

October 21, 1996 Amherst
October 25, 1996 Boston
October 29, 1996 Lowell

Topics to be covered include adolescent hepatitis B immunization, vaccine preventable disease morbidity, hepatitis B vaccine issues, school immunization regulations, school surveys, the new TB recommendations for school-age children, and community resources for schools. This course is accredited for five nursing CEUs.

For additional information call Dr. Patricia Piessens at the School Health Institute (508) 999-8249 or Gail H. Chaffee, RN, Adolescent Hepatitis B Coordinator, Massachusetts Immunization Program (617) 983-6800.

Advisory group formed

The first meeting of the Advisory Group on Sexually Transmitted Disease and Women's Health was held on June 4. The meeting drew participants representing a variety of interests and agencies. A brief review of the epidemiology of sexually transmitted disease in women was followed by an overview of the work of the Division of STD Prevention.

The members worked in small groups to discuss priority issues regarding women and sexually transmitted diseases. These issues form the basis of a needs assessment and planning document that will be distributed to all members for further input. Some areas for collaboration have already been identified. The purpose of the Advisory Group is to foster cooperation among members, as well as provide advice to the Division of STD Prevention and other agencies.

STD education

STD/HIV/TB Management in Correctional Settings

October 24, 8:00–12:30 at the STD/HIV Prevention Training Center of New England. CMEs and nursing CEUs will be available. For information call (617) 983-6945.

Family Planning for Advanced Practice

October 25 and 26, 7:30–5:00. Includes discussion of STDs within context of family planning. Cosponsored with ABCD/Boston Family Planning. 16.5 nursing contact hours. For information and registration call Shelly Mains at ABCD, (617) 357-6000, x235.

Three-Day STD Intensive

November 18–20. Twelve hours of home study followed by 24 hours of on-site training consisting of clinical practicum, case studies and laboratory workshop. Course designed for clinicians who wish to update basic STD theoretical knowledge and management of STDs in ambulatory primary care settings. For more information call (617) 983-6945.

1996 Annual STD Update

December 4. STD/HIV Prevention Training Center of New England and Massachusetts Health Research Institute initiative. Seven-credit hours of category 1 CMEs (5 qualify for risk management credit). Nursing CEUs also available. For more information call (617) 983-6945.

National survey of partner notification

Identifying susceptible people who have been exposed to health-threatening infections and fashioning a protective intervention is at the heart of public health practice. Partner notification (PN) is a standard protective intervention for sexually transmitted diseases (STDs). PN has worked, particularly well against bacterial STDs, which can be cured or prevented with antibiotics. With the advent of viral STDs, PN services are being looked at in a new light: Is the service beneficial if the infection cannot be cured?

To see what policies and models of service are used to shape PN services in different states, the Massachusetts Division of STD Prevention conducted a national survey of STD and other infectious disease prevention programs. Surveys were sent to the director of each STD project area in the U.S. and its territories in June 1995. Preliminary results from this survey appeared in volume 4, issue 2 of *CD Update (April 1996);* final results are below.

Responses from 49 (76%) project areas were received and analyzed. The majority of respondents conduct PN as policy, although 15 respondents said that offering the service was mandated by law. There were written protocols for PN in 41 (83.7%), and 38 (79.6%) had written protocols on how to counsel partners. Forty-two (85.7%) provided formal training to the people who did the notification. Three basic models were used: patient referral, conditional referral and provider referral. Patient referral occurs when the infected person notifies his or her partner directly. Conditional referral involves an agreement between the patient and the health department's disease intervention specialist (DIS), who investigates cases of STD to stop transmission. The patient agrees to inform his or her partners. If the partners have not been seen by a medical provider within a specified time, the DIS commences notification. In provider referral, the DIS does the notification on behalf of the patient. Different types of PN were emphasized for different STDs.

Evaluations of PN concentrated more on process (*e.g.*, number of contacts elicited per case [47/49], percentage of contacts located [45/49], percentage of contacts treated prophylactically [45/49]) and less on cost-benefit [21/49] or outcome (*e.g.*, percentage of contacts accepting services [30/49], measures of behavioral change [7/49]).

These data suggest that there is strong support for PN as a disease prevention tool among STD programs. Public health literature has many citations attesting to the preventive impact of PN. Indeed, recent increases of syphilis in Baltimore and Los Angeles after reducing epidemiologic staff provide evidence of PN's importance. However, particularly in regard to viral STDs, more evaluation needs to be done of PN's role as a stimulus of behavioral change.

Regional Update: TB

Metro Boston Region—TSA 2 (508) 851-7261, Ext. 48 or (617) 727-7908, Ext. 48 **TSA Nurse** Jo-Ann Keegan, RN, MS

Personnel

Kenedy Mondesir was recently welcomed as a new community outreach worker for the entire TSA 2 region. Kenedy is fluent in Creole, Spanish and French and works closely with many at-risk patients. The Metro Boston Region, also known as TSA 2, includes suburban Boston west to Framingham, north to Wakefield and south to Norfolk County. The office is located on the grounds of Tewksbury Hospital in the Regional Health Office.

Epidemiology

In 1995, 58 cases of TB were diagnosed in TSA 2, 18% of the state's 330 cases for that year.

A review of cases in children (< 15 years of age) in TSA 2 was recently done. For the last 5 years (1991–95), there were 12 cases of tuberculosis verified in children. No cases in children have been reported in TSA 2 yet this year. A profile of these cases among children over this period showed that all but one child belongs to an identified high-risk group. This review indicates that as tuberculosis rates in the general population, and in children in particular, continue to decline, the challenge of health care personnel will be to focus screening on those children at risk of exposure.

Clinical Services

Clinical services for TSA 2 are currently provided free in the following locations: Cambridge Hospital; St. Elizabeth's Hospital, Brighton Marine Health Center; MetroWest Medical Center, Framingham Campus, and Middlesex County Hospital in Waltham.

Communicable Disease Update is a quarterly publication of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health.
David H. Mulligan, Commissioner

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Kathleen S. Hursen, RN, MS	Caryl A Haddock

Save the dates!

November 6

Immunization Tracking Committee Quarterly Meeting, 9:30–11:00 in the Auditorium at the State Laboratory Institute, 305 South Street, Jamaica Plain. Call Robert Rosofsky at (617) 983-6836 for more information.

November 21

NECON: New England Coalition for Health Promotion and Disease Prevention will hold its annual regional forum. The topic this year is "The Role of Government in the Evolving Health Care System." Call Carol McCullogh, NECON Conference Coordinator, at (508) 252-3146 for more information.

November 21

Western & Central Regional TB Conference for public health nurses and other health care workers interested in TB prevention and control. For information call Evelyn Thomas at (413) 736-8939.

December 5

"Surveillance of Vaccine-Preventable Diseases," 1:00–3:00. A live interactive satellite videoconference including guidelines for vaccine-preventable diseases, case investigation, and outbreak control. Call Donna Rosen, Massachusetts Nurses Association at (617) 821-4625 x719 for locations and registration information.

Regional Update: Immunization

Metro (617) 983-6860 **Admin. Assistant:** Carolyn Thames **Nurse:** Peg O'Toole, RN

Morbidity

Pertussis continues to be the major source of morbidity in the Metro Region over the summer. Three outbreaks were apparent at the close of school in June. Regional schools covering the towns of Norfolk, Wrentham, and Plainville as well as Lincoln and Sudbury lead in number of cases. There was also an outbreak in Holliston that was associated with sports teams in the Norfolk-Wrentham-Plainville schools.

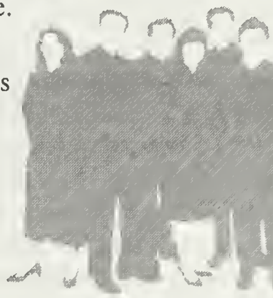
We urge providers to seriously consider pertussis in any patient with a cough of two weeks or more.

Personnel

Lisa Berger has left her position as epidemiologist to pursue a dream to travel. We will all miss Lisa very much. We're grateful for all her hard work and for what she taught us about pertussis!

Please direct any calls concerning vaccine preventable disease or vaccine distribution to Peg O'Toole or Carolyn Thames. Plans are underway to fill the vacant Metro epidemiologist position.

Christine Johnsen, the Immunization Epidemiology Coordinator, has also left to pursue other interests. We will miss her, too, and wish her success in all her future endeavors.



Your Prevention Centers

See Massachusetts Prevention Centers article on page 6.

Greater Western MA (413) 584-3880, CHNA 1,2,3
Lower Pioneer Valley (413) 732-2009, CHNA 4
Greater Framingham/S Central MA (508) 875-5419, CHNA 5,6,7
Greater Worcester/N Central MA (508) 752-8083, CHNA 8,9
Merrimack Valley (508) 688-2323, CHNA 10,11,12
West Suburban/North Shore (508) 745-8890, CHNA 13,14,15
Metro/Suburban MA (617) 441-0700, CHNA 16,17,18
Boston (617) 423-4337, CHNA 19
Metro/Southeast MA (508) 583-2350, CHNA 20,21,22,23
Southeast Coastal MA (508) 996-3147, CHNA 24,25,26,27

Clarification

Hepatitis B needle tips

The Massachusetts Immunization Program is now providing hepatitis B vaccine for **adolescents** in prefilled syringes with one-inch needles and the appropriate dose.

It's here!

Varicella vaccine is now being distributed in Massachusetts. To find out how to order it for your practice, call Lois Ciccone in the Vaccine Management Office at (617) 983-6812.

You be the epi!

As a field worker (disease intervention specialist) within the Division of STD Prevention you get three reports of syphilis from three different sources within a two-week period. Patient #1 is a 41-year-old male who went to a local ER complaining of urethral discharge and inguinal adenopathy. He was diagnosed with recently acquired syphilis (RPR 1:128 and MHA-TP reactive) as well as urethritis. Patient #2 is a 23-year-old male whose blood work upon admission to a county jail revealed previously unrecognized secondary syphilis who had a history of rash involving the palms and soles (RPR of 1:128 and MHA-TP reactive). Patient #3 is a 28-year-old female who, on admission to drug treatment, had a routine syphilis serology (RPR of 1:128 and MHA-TP reactive) without other symptoms. All three patients have a history of illicit drug use. Are these cases related and how might they be related?

Analysis

After finding each of the patients (which took good field work because two of the patients gave false addresses and one gave a false name), you conduct interviews. While patient #1 identifies two women as sexual partners, neither is patient #3. Both partners have negative serologies but are treated to prevent syphilis. Patient #2 also identifies two female contacts who are roommates. Both have syphilis and are treated. Patient #3 will not divulge any contacts during the interview. She says that she will notify the people that need to be told. You end the interview by giving her your business cards to give to people she notifies. Five people come in as a result of her notification. All five of those contacts are treated prophylactically.

While a relationship among these three clients was not established during the interviews, you find that these clients not only know each other, but live within several blocks. Two of them are neighbors. Very likely these cases are interrelated. This cluster investigation is still ongoing and interviews are still being conducted. It is unclear how widespread it may be. The relationship among these cases would never have been apparent without thorough field work. This shows how important it is to thoroughly investigate all new cases and to interview clients and their contacts until all contacts have been identified and treated.

Massachusetts Prevention Centers: Working together to build healthy communities

The ten Massachusetts Prevention Centers compose a statewide training and technical assistance system established in 1979. These Prevention Centers are funded cooperatively by the MDPH Bureaus of Substance Abuse Services, Family and Community Health, HIV/AIDS, and Communicable Disease Control; the Executive Office of Public Safety; and the Massachusetts Department of Education.

The Prevention Center system is based on the following premises: 1) communities should be involved in disease prevention and health promotion planning, 2) technical and human resources must be available to support community planning, implementation and evaluation activities, 3) efforts are enhanced when communities have opportunities to establish linkages with other agents of change, and 4) public awareness of health issues and available resources are essential for communities to take action.

The Prevention Centers serve local coalitions, school systems, municipalities, Community Health Network Areas (CHNAs) and other community health planning and disease prevention initiatives. Their staffs promote participation in community initiatives across the state and are trained in several community health planning and development models. Prevention Center staffs also use a train-the-trainer model to provide health education training on a range of health issues including immunizations, HIV/AIDS, alcohol and other drugs, tobacco, nutrition and injury. Each Prevention Center has a resource library, which provides residents, community organizations and other groups access to a wide range of books, journals, pamphlets, videotapes and films, multicultural resources and on-line databases.

Communicable disease activities include a statewide immunization initiative to improve access to and utilization of immunization services. The Springfield Prevention Center is collaborating with the Division of STD Prevention, youth peer leaders, and other community organizations to educate youths, medical providers and parents about STD and sexuality issues faced by teens. The Brockton Prevention Center, in collaboration with MDPH, local Haitian and Cape Verdean organizations and health care providers, is working to increase community knowledge and awareness of TB, STDs and HIV and to improve access to related medical services. For Prevention Center locations see page 5.

Now's the time

Fall is the season for making sure that your adult patients are up to date on their vaccinations. Recent studies have shown that risk factors for influenza, pneumococcal disease, tetanus and diphtheria increase after age 50. To help prevent these diseases, the Massachusetts Immunization Program (MIP) provides pneumococcal, influenza, and tetanus-diphtheria (Td) vaccines for adults. These vaccines are also available for younger individuals who need them because of medical conditions or other risk factors.

Flu, pneumococcal and Td vaccines can be safely and effectively administered simultaneously, as long as different anatomical sites are used. Therefore, the MIP encourages providers to use annual flu shot visits as an opportunity to assess their patients' need for pneumococcal and Td vaccines.

Pneumonia and flu are the fourth leading cause of death among the state's residents aged 65 years and older. According to the 1993 Behavioral Risk Factor Survey, only half of residents aged 65 and older had received flu shots in the preceding year and only 22% had ever received pneumococcal vaccine. Interestingly, immunization rates in women were more than double those in men, as shown in the accompanying graph.

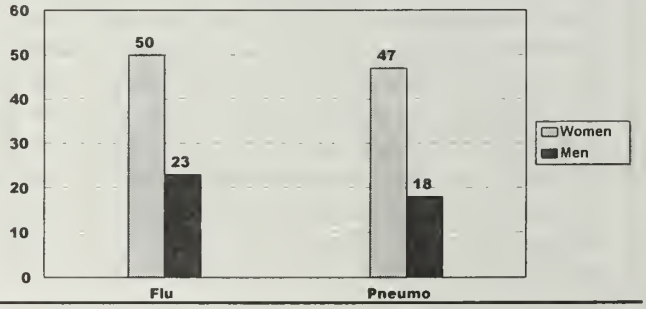
According to the Centers for Disease Control and Prevention (MMWR1996:45(RR-5)), 52% of U.S. seniors and an estimated 30% of younger high-risk individuals got flu shots. Nationally, only 28% of those at risk for pneumococcal disease are estimated to be vaccinated. Immunization levels for both vaccines are substantially lower among black and Hispanic Americans.

In an effort to improve vaccination levels in Massachusetts, the Adult Immunization Coalition is focusing public education efforts on the state's black and Hispanic communities. One strategy is to recruit community leaders to receive their vaccinations publicly, during locally well-publicized events. Health care providers in the area can assist such efforts by participating in these events and by reviewing medical records to identify their high-risk patients in need of immunization.

Mid-October to mid-November is a good time for conducting organized vaccination campaigns. However, high-risk individuals can and should be vaccinated any time from early October through the end of the flu season.

Massachusetts Residents Aged 65+ in 1993 Who Had a Flu Shot in the Previous Year and Who Ever Had a Pneumococcal Shot

Percentage by Sex



TB Update

New recommendations

(Continued from page 1)

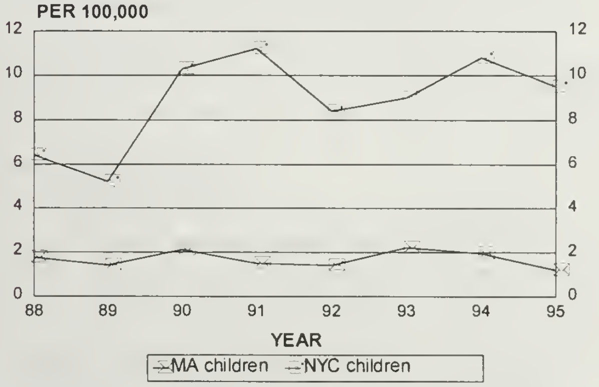
2. Test ONLY children at risk of exposure to TB because:

- Inappropriate testing of low-risk children predictably produces false positive test results leading to unnecessary concern and inappropriate treatment.
- Selective testing of those at higher risk of exposure focuses time, energy and resources on the population that will most benefit from preventive treatment.
- Limiting screening to higher-risk infants and children increases the incentive for test reading and follow-up.
- Risks associated with unnecessary treatment of uninfected infants and children are minimized.

3. Eliminate school TB skin test requirement based on geographic risk because:

- Even the highest prevalence communities in Massachusetts do not have a prevalence high enough to justify Mantoux skin tests for all children in the community.

Comparison of TB case rates between children of Massachusetts and New York City, 1988 –1995



Children < 15 years of age

MDPH / DIV OF TB

The identification of at-risk populations is based on epidemiological data. A high-risk neighborhood or community does not automatically mean that an entire city is at high risk. Nor does it necessarily mean that an individual living in that neighborhood or community is at high risk.

The recommendations contain a questionnaire that health care providers can use to determine a child's risk of TB exposure. A child with an elevated risk of exposure should have a Mantoux skin test.

The questionnaire asks parents these questions:

- Has your child lived with or spent time with anyone who possibly or definitely had tuberculosis or had a positive skin test for tuberculosis?
- Did you (parent or guardian), your child, or anyone else living in your household come to the United States from another country? (Providers will be given a list of high TB prevalence countries.)
- Has your child lived with or spent time with adults who:
    - Were homeless, living either on the street or in a shelter?
    - Have a medical condition that would put them at higher risk for TB (silicosis, HIV infection, steroid therapy, etc.)
    - Used intravenous drugs or other street drugs?
    - Lived in a correctional facility (prison), nursing home or mental institution?

Mantoux test results should always be read by a health professional. A Mantoux test result is considered positive at three different levels (≥5, ≥10 and ≥15 mm) of induration depending on the individual's degree of risk of tuberculosis.

- If a child has no known risk for TB, then only a large reaction (≥15) is considered positive.
- If a child is very young (<4), has other medical risk factors, or has some environmental exposure to TB then an intermediate reaction (≥10) is considered positive.
- If a child has a high risk (for example, a child who lives in a household with someone who has TB) then a small reaction (≥5) is considered to be positive.

Screening School Children for Tuberculosis (TB)

Include a reminder that the pupil is due to have a TB risk assessment when a notice is sent to the child's home at the time of scheduled physicals and upon entry into the school. The MDPH Division of TB Prevention & Control will draft a letter that school nurses can send to parents and private providers. It is not the responsibility of the school nurses to evaluate the child to determine the risk of exposure to TB, the necessity for a TB (Mantoux) test, follow-up on positive reactors or children placed on isoniazid (INH) preventive therapy. Responsibility rests with the primary care providers. The school nurse may choose to check a child's TB (Mantoux) test or monitor preventive therapy at the request of the private provider.

Questions can be answered by the nurse for your Tuberculosis Surveillance Area (TSA).

TSA 1 - Carol Cahill, RN, Western & Central Regions
(413) 736-8939
TSA 2 - Jo-Ann Keegan, RN, MS, Greater Metro Boston
(508) 851-7261, x 48 or (617) 727-7908
TSA 3 - Nancy Taylor Flynn, RN, BS, Northeastern Region
(508) 851-7261, x 50 or (617) 727-7908
TSA 4 - Susan Yoon, RN, MS, Boston TB Program
(617) 534-4585 or (617) 534-4875
TSA 5 - Anne Empey, RN, Southeastern Region
(508) 947-1231

Communicable Disease Updates

January — June 1995 vs. January — June 1996: Reported Cases

DISEASE	1995	1996*	% change from 1995
AIDS	718	604	-16%
Botulism	0	0	0%
Campylobacter	695	610	-12%
Chlamydia	3,401	2,729	-20%
Cryptosporidiosis	17	30	+76%
E. coli O157:H7	38	40	+5%
Giardiasis	389	367	-6%
Gonorrhea	1,200	901	-25%
Hepatitis A	69	99	+43%
Hepatitis B (acute)	67	37	-45%
Lyme Disease	91	83	-9%

* Preliminary data. Reporting not yet complete.

DISEASE	1995	1996*	% change from 1995
Measles	2	9	—
Meningitis (Neisseria)	19	16	-16%
Pertussis	181	332	+83%
Rabies (animal)	295	51	-83%
Rubella	6	20	—
CRS**	0	0	0%
Salmonellosis	685	733	+7%
S. typhi (Typhoid)	28	9	-68%
Shigellosis	114	126	+11%
Syphilis (early)	119	113	-5%
TB	113	85	-25%

** Congenital Rubella Syndrome

Communicable Disease Update
State Laboratory Institute
305 South St.
Boston, MA 02130

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Maintain that cold chain!

Distribution of varicella vaccine was recently implemented in Massachusetts. **This vaccine is very temperature sensitive!** In fact, proper handling and maintenance of the cold chain is crucial to the effectiveness of **all** vaccines. A vaccine inactivated by a break in the cold chain can be dangerously ineffective.

The Massachusetts Immunization Program suggests that one individual in a practice be designated as the "vaccine manager" to be responsible for ordering vaccine, ensuring that vaccines are stored properly, and recording usage. The "vaccine manager" would train all individuals handling and administering vaccines about specific storage requirements, stability limitations of vaccines, as well as correct recording of use. When unsure of vaccine storage requirements, *always refer to the package insert*. Listed below are some key guidelines for safe vaccine storage and handling in your office:

- The refrigerator and freezer should each have a thermometer.
- The temperature range for the refrigerator should be 35°- 46° F (2°- 8°C).
- The temperature for the freezer should be 5°F or lower (-15°C or lower).
- Check and record temperatures twice daily.
- Stack vaccine neatly, with space for accessibility and air flow.
- Rotate vaccine stock, using the vaccine with the shortest expiration date first.
- OPV and varicella vaccine must be stored in the freezer. All other vaccines must be refrigerated.
- Do not store vaccine on the doors of the units.
- Store ice packs in the freezer compartment.

Responsible vaccine management and accountability is critical to ensure that Massachusetts will continue to have adequate stores of vaccine available, and that patients will receive potent and effective vaccines.

MASS. HS 30.1703: 5/1

For Healthier Lives

Massachusetts Department of Public Health

Communicable Disease Update

Newsletter of the Bureau of Communicable Disease Control

Volume 5 Issue 1 Winter 1997

GOVERNMENT DOCUMENTS COLLECTION

University of Massachusetts Depository Copy

Meningitis

When people hear of a case of meningitis, anxiety and confusion often result. This is largely due to the seriousness of the illness and the fear of transmission to contacts. Meningitis, defined as an inflammation of the membranes surrounding the brain and spinal cord, is most commonly caused by certain viruses or bacteria.

Viral meningitis

Viral (aseptic) meningitis is more common and generally less severe than bacterial meningitis. The incubation period averages 3–6 days and common symptoms include fever, headache, irritability, and stiff neck. Cases are more prevalent in the summer and fall. Enteroviruses, which cause the majority of viral meningitis cases, are shed in feces and respiratory secretions and are transmitted from person to person. Hand-washing and attention to good hygiene are excellent preventive measures for viral meningitis. No specific treatment exists for cases or close contacts.

Bacterial meningitis

Occurring predominantly in the winter and spring, bacterial meningitis is less common and generally more severe than viral meningitis. Symptoms of bacterial meningitis can include fever, headache, stiff neck, nausea, and a rash. The majority of bacterial meningitis is caused by three types of bacteria: 1) *Streptococcus pneumoniae*, which primarily affects children under 1 year of age and the elderly; 2) *Neisseria meningitidis*, which primarily affects children and young adults; and 3) *Haemophilus influenzae* type B (Hib), which primarily affects children between 2 months and 5 years of age. Hib disease has declined dramatically since the introduction of the childhood Hib vaccine in 1987.

N. meningitidis and Hib are found in the nose and throat of infected individuals and can be transmitted to close contacts via saliva and respiratory droplets. Close contacts include household members, day care contacts, and those who kiss or share utensils, foods, beverages, or cigarettes with someone who is infected. Health care workers who intubate, suction, or resuscitate infected patients would also be considered close contacts. Depending on the case-specific setting, other individuals may be identified as close contacts. To prevent secondary cases due to *N. meningitidis* and Hib, close contacts should be evaluated for possible prophylactic treatment.

If you see a patient with meningitis:

1. **Report the case to the local board of health.**
2. **Distribute information about the signs and symptoms of meningitis.**
3. **Advise that close contacts of meningitis cases caused by *N. meningitidis* or Hib be evaluated for prophylactic treatment.**

Health is beautiful

The beauticians serving the African-American community in Springfield are being recruited to assist in an STD prevention project. Beauty shops have long been known as safe places for confidential discussion of all sorts of issues. Recently, an article was published about the role beauticians play in educating women about breast cancer. With that in mind, Division staff in Springfield (P. Briggs and M. Early-Moss) proposed to enlist the assistance of beauticians to promote awareness of STDs and the availability of clinical services in the area. The need for such an educational campaign is underscored by the higher rates of STDs in Springfield compared with the rest of Massachusetts.

At the first meeting with beauticians in the area, those asked to help with the project responded enthusiastically. They offered suggestions about what sorts of materials should be developed for the campaign. A second meeting with a larger group is scheduled for early in 1997 to follow up on the work begun in the first meeting.

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Livestock rabies quarantine: 10 days or 14?

Regulations of the Massachusetts Department of Food and Agriculture's Bureau of Animal Health require a 14-day quarantine period for livestock that bite or otherwise expose humans to rabies, but **public health officials should be informed of the health status of the animal after 10 days** so they can make decisions about postexposure prophylaxis.

Exposure is defined as a bite or salivary contact with mucous membranes or open wounds, and notification after 10 days of quarantine is the general policy following such exposure. However, if the exposing animal is unhealthy, attacks in an unprovoked manner, inflicts a bite to the head or neck, has a history of being exposed to a rabid or potentially rabid animal, or has wounds of unknown origin, euthanasia of the animal or prophylaxis of the person may be appropriate. Therefore, each situation needs to be considered on a case-by-case basis.

Although cattle and other livestock are fairly susceptible to rabies (Massachusetts has documented 12 rabid cows in the past four years), one study of infected cattle found that most either didn't shed virus at all or shed virus in saliva for no more than three days before symptom onset.

In addition, no human cases of rabies in the United States have been acquired from livestock—even more than 50 years ago, when ten times as many cattle were rabid. If the virus were readily spread through livestock saliva, one would expect some farmers to have contracted rabies by sticking their arms down the animals' throats, which they often do to check for or clear foreign body obstructions.

For assistance in evaluating human exposures to livestock, contact the Division of Epidemiology and Immunization at (617) 983-6800. To request that a cow or other livestock be quarantined or for information about quarantined livestock, contact the Bureau of Animal Health at (617) 727-3018, x158.

Shoe-leather epidemiology gets a lift from the Lab

Person, place and time of infection are easily determined by old-fashioned shoe-leather epidemiology, but science now provides the epidemiologist with more powerful tools to link cases of disease. The Massachusetts Department of Public Health State Laboratory Institute (SLI) is a regional reference lab for one of these, pulsed-field gel electrophoresis (PFGE), and assists in epidemiologic investigations of disease throughout New England.

PFGE is a laboratory technique used to determine the genetic relatedness of strains of bacteria. DNA pieces from bacterial isolates are incorporated into an agarose gel and subjected to a pulsed electric field that moves them through the gel at varying speeds according to size. The resulting patterns provide genetic "fingerprints" of the organisms. The band patterns of different isolates are compared and their relatedness is determined based on the pattern similarities.

PFGE was recently used to verify the existence of an outbreak of *E. coli* O157:H7 linked to mesclun salad greens in Connecticut. Isolates from Connecticut cases of *E. coli* O157:H7 were compared with isolates from Massachusetts cases. The investigation verified that Connecticut cases were caused by a single strain of *E. coli* O157:H7 and identified two Massachusetts cases that were laboratory and epidemiologically linked to the Connecticut outbreak. PFGE is also being used to compare Massachusetts isolates of *Neisseria meningitidis* with isolates from cases in neighboring states. This laboratory technique has proven to be invaluable in identifying links between cases of disease, thereby aiding in the control and prevention of disease.

Personnel

The Massachusetts Immunization Program welcomes three new immunization epidemiologists and a morbidity coordinator to our staff. James Ida, MPH; Flora Sadri, MPH; and Brian Riley, MA, MPH will be conducting outbreak control for vaccine-preventable diseases throughout the Commonwealth. Katherine Yih, PhD, MPH, is the new statewide morbidity coordinator for vaccine-preventable diseases. Their offices are located at the State Laboratory Institute in Jamaica Plain.

STD Update

The new generation of chlamydia tests

The STD Laboratory at the State Laboratory Institute now uses a ligase chain reaction (LCR) test system for chlamydia. The LCR uses DNA amplification, a new generation of test technology. It is more sensitive than the previous system, which required confirmatory testing and could detect chlamydia only if several thousand organisms were present. LCR can detect chlamydia if there are as few as 1–10 organisms present.

As a result of this increased sensitivity, the number of positive tests among women in STD clinics has nearly tripled. Data for the first quarter of testing are shown below.

Date	Test	No. Tested	No. (%) Positive
July–Sept. '95	EIA/Block	783	24 (3.1%)
July–Sept. '96	LCR	739	64 (9.2%)

As the use of DNA amplification technology increases, we may see a reversal of the six-year downward trend in reported chlamydia cases. Such an increase might be an artifact of more sensitive testing. However, this apparent increase could be followed by a true decline, as previously unrecognized cases and their partners are treated.

Save the dates!

CDC Satellite Training Course:
Update on Adult Immunization
April 24, 1997; times and locations to be announced
Mark the date on your new calendar now!

Massachusetts Public Health Association Women's Breakfast Series at Tufts New England Medical Center; for more information call Christie Burke at (617) 983-6959.

Topics:

Eve Is More than Adam's Rib:
The Women's Health Initiative—Feb. 12

Am I Blue?
Myths and Realities of Depression—March 13

"The Doctor Will See You Now"
Improving the Dialogue—April 9

Have We Come a Long Way?
Women and the Media—May 14

Nurses train for SANE

Sexual Assault Nurse Examiner training program

When the Department of Public Health's SANE program achieves full operation, it will train 250 registered nurses to care for the estimated 1,700 residents who seek treatment in hospital emergency rooms each year after a sexual assault. These nurses will be available on-call to participating emergency departments to provide sensitive and timely care for victims of sexual assault.

Training has already begun. In November, Dr. Ratelle of the HIV/STD Prevention Training Center of New England spoke to a group of registered nurses on techniques of examination for sexually transmitted diseases in victims of sexual assault. Limited program operation will begin in Boston and Lawrence this spring.

Nurses interested in becoming SANE-certified by the Department of Public Health should have at least five years of nursing experience, preferably with emergency department, psychiatric or ob/gyn experience. Nurses with experience in the care of victims of sexual assault will be considered as well. The certification requirements include a 40-hour education program, a written exam, and completing a pelvic exam and a preceptorship. Nurses who want more information should contact Lori Sherman at (617) 624-6085 or Donna Doyle at 624-6076.

STD education

Family Planning for Advanced Practice I and II
February 21 & 22; cosponsored with ABCD. Two full days covering family planning and sexually transmitted diseases. Nursing CEUs available. For more information call Shelly Mains, Training Coordinator at ABCD, (617) 357-6000, x235.

HIV/STD Prevention Training Center 1997 Calendar
Complete schedule available; call Wendy Hylton at (617) 983-6945. **Partial listing:**

Three-Day STD Intensive
Jan. 27–29; Feb. 24–26; March 24–26; June 2–4; Sept. 29–Oct.1; Oct. 27–29

Advanced STD Intensive (5 days)
Spring: Lectures April 2–3; Clinical April 28–30
Fall: 5 consecutive days, December 1–5

Bright-field Microscopy (half or full day)
Wet Mounts: Feb. 26; April 30; June 4; Oct. 29; Dec. 4
Stained Smears: April 30; Oct. 29

Syphilis Serology (1 day): May 14

Dark-field Microscopy (half-day): November 6

Regional Update: TB

Western and Central—TSA 1

(413) 736-8939 **Secretary:** Evelyn Thomas **Nurse:** Carol Cahill, R.N.

TSA 1 consists of 5 counties: Berkshire, Franklin, Hampden, Hampshire and Worcester. The Public Health Nursing Advisor is Carol A. Cahill, R.N. Secretarial duties are performed by Evelyn Thomas. We have one part-time case register surveyor, Kathleen Lupien. Community outreach is provided by Evelyn Rodriguez (Western MA) and Wallezka Rivera (Central MA). Beginning January 1, 1997, staff will be located at the DPH regional office in Northampton.

Clinical services

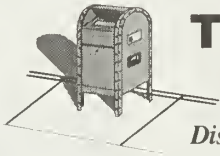
Free clinical services are provided at the Baystate Medical Center, Springfield; Berkshire Medical Center, Pittsfield; Burbank Hospital, Fitchburg; Franklin Medical Center, Greenfield; Harrington Memorial Hospital, Southbridge; Holyoke Hospital, Holyoke; and Family Health & Social Services, Worcester (in the former Worcester City Hospital).

Epidemiology

In 1995, 64 cases of *M. tuberculosis* were verified. Cities in TSA 1 with case rates higher than the state's case rate include Springfield and Worcester.

Education activities

Recently, a half-day program entitled, "Region TB Update, 1996" was held at Holyoke Hospital. This program provided health care professionals from the area boards of health, clinics and other health care agencies with insight into the newest guidelines and general information related to the TB Prevention and Control program.



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Allison Hackbarth, MPH
Caryl A Haddock

Tell us your ideas!

The reader survey we recently ran in *Communicable Disease Update* indicated that most readers consider "**You be the epi**" very informative or useful. Now we're inviting you to send in the epidemiology questions you'd like to see answered in the column. What communicable disease questions, concerns or situations that you face in your office would you like to have epidemiologically analyzed? We will gladly base future columns on the issues you send in. Send your ideas to: Allison Hackbarth, MPH, c/o *Communicable Disease Update,* State Laboratory Institute, 305 South Street, Boston, MA 02130.

DTaP for your patients

Tripedia, the first diphtheria, tetanus, acellular pertussis vaccine licensed for use in infants and children 2 months through 6 years old, is available through the Massachusetts Immunization Program (MIP). To get it for your patients you must use the most recent (pink) version of the vaccine order form, which is available from your vaccine distributor or regional immunization office.

Several studies have shown that DTaP vaccine is associated with fewer local reactions, fever and other common systemic symptoms than whole-cell DTP vaccine. Two clinical trials showed protective efficacy rates of 69–80%. The Advisory Committee on Immunization Practices (ACIP) recommends DTaP for routine use as the first four doses of the five-dose pertussis vaccine series.

Until revised vaccine usage forms are available, please record usage of both DTP and DTaP vaccines under the column for DTP on your reports (green "bubble" sheets).

Regional Update: Immunization

Western

(413) 545-6600 **Epidemiologist:** Marija Popstefanija, MD, MPH **Nurse:** Judith Coates, RN
Admin. Assistant: Marilyn Brown

Morbidity

The number of pertussis cases in the western region increased substantially during the fall. Two outbreaks occurred: one at a large hospital in Hampden County and the other at Amherst Junior High School. The hospital outbreak in Hampden County involved seven reported cases of pertussis from June 28 through August 23. Five of the seven were employees directly linked to the neonatal intensive care unit, one confirmed case occurred in the pharmacy, and one in a food service employee. In response, 226 people were prophylaxed.

The second outbreak at the junior high in Amherst involved 11 confirmed cases, nine of which were in the ninth grade, one a sibling in the eleventh grade and one in an elementary school. Three sports teams as well as 210 contacts were prophylaxed.

During the third quarter of 1996, there were 39 confirmed pertussis cases in the western region compared with 20 in the first quarter and 22 in the second. The number of cases in the last quarter of the year is expected to be even higher.

Vaccines

Distribution of DTaP vaccine (Tripedia) began in October. The IIS (Important Information Statement) for this new vaccine is also available. Please call our office at the number above if you have not received information on DTaP.

Approximately 70,000 doses of influenza vaccine were distributed to boards of health, nursing homes, and other providers during the fall of 1996. Please remember to submit your flu and pneumococcal vaccine usage forms by February 1, 1997.

An ample supply of pneumococcal vaccine is still available, and can be given year-round. Please call our office to order a supply.

Winter reminder: When transporting vaccines, do not leave them in your car for long periods of time. It might seem safe in the winter, but vaccines meant to be refrigerated could freeze in the trunk of your car. When this happens, vaccines are then destroyed and can **NOT** be administered.

Teens now eligible

The Children's Medical Security Plan is now available for teenagers (through 18 years old) as well as younger children. This subsidized health insurance program provides free or low-cost coverage (depending on family income) for children from newborns through age 18.

Call (800) 909-2677 for more information.

You be the epi!

A resident of your town contacts you at your board of health office to report that his Labrador retriever has just returned home after what looks like a vicious fight with an unknown animal. The dog suffered many bite wounds on its face and neck, and the neck appeared to be wet, the man said. He picked some gray fur out of the wounds and then washed the wounds thoroughly by hand. He wants to know whether the dog should be brought to a veterinarian for its rabies shots.

You call his veterinarian, who reports that the animal has never been vaccinated against rabies. You must decide how to handle the dog and whether the man should be treated. What should you do?

Analysis:

It is likely that the dog was in a fight with a wild animal, possibly a raccoon. Because raccoon-transmitted rabies is now in all parts of the state, the pet could have been exposed to the rabies virus and possibly exposed the owner. The man should be referred to his health care provider, who will assess the integrity of the skin on the man's hands and determine whether he could have been exposed. If he is at risk, the provider will treat with rabies immunoglobulin (RIG), the human diploid cell vaccine (HDCV) or the rabies vaccine adsorbed (RVA) and possibly a tetanus shot.

Since the dog was not vaccinated and could have been exposed to a rabid animal, it should be euthanized. If the owner refuses this, he should be advised of the risk that his dog will develop rabies. Notify the local animal control official as the dog should be strictly confined for six months, with regular observations throughout. The pet may be confined off the owner's property or the dog may be kept at home in the house, garage or some other escape-proof building or enclosure approved by the local animal control official. The animal should be vaccinated one month before release.

Immunization Update

Order now!

It may seem early to start thinking about National Infant Immunization Week, but the third week in April is not that far off. This is our annual opportunity to emphasize the importance of protecting babies' health by vaccinating them on time. To make sure you're prepared to get the word out, look over the list of materials below and get your order in early.

The following items are available through the Massachusetts Immunization Program. Call your regional office or Caryl Haddock at (617) 983-6811.

Payroll & bill stuffers

- 10 Good Reasons to Vaccinate on Time (English & Spanish)

Videos

- Before It's Too Late, Vaccinate (16 min., English & Spanish)

Posters

- Immunize Your Children (Spanish; limited number of English available)
- 9 Good Reasons to Immunize (English only)

Fact Sheets (English only)

- Chickenpox
- Hepatitis B
- Hib Vaccine
- Measles
- Mumps
- Pertussis
- Polio
- Rubella

Booklets & Pamphlets

- Parents' Guide to Immunizations (English or Spanish)
- Hepatitis B Information for Parents (English, Spanish or Portuguese)
- Measles Is Dangerous (Spanish or Portuguese)
- Hepatitis B Information for Pregnant Women (English or Spanish)
- Vaccination schedule (English)
- Vaccinations: The Greatest Gift You Can Give Your Grandchild...and Yourself (English only)

The following items are available through your area Prevention Center (see p. 5 of October 1996 *CD Update* for phone numbers):

- Parent booklets, "Give Your Child a Shot at Good Health" (English, Spanish, Portuguese, Chinese, Khmer [Cambodian], Vietnamese, Haitian Creole, or Russian)
- Coloring books, "My Book about Shots" (English, Spanish, Portuguese)

Tracking flu in Massachusetts and around the world

In an effort to assess and respond to influenza activity in Massachusetts, the MIP (Massachusetts Immunization Program) has established a network of 34 sentinel health care sites: community health centers, teaching hospitals, and private physicians' practices distributed across the state. Throughout the flu season, these sentinel sites submit specimens to the State Laboratory Institute every week for viral isolation and testing. Flu surveillance is based on specimens submitted by sites in the network as well as on specimens and reports sent to the MIP by individual health care providers.

The sentinel sites in Massachusetts contribute to a worldwide effort to track specific patterns of influenza activity and virus circulation. This information is important in planning and evaluating influenza control activities and identifying the strains to be included in next years influenza vaccine.

Handle with care

As noted in previous articles, varicella vaccine is extremely temperature-sensitive and therefore requires careful handling and storage. This vaccine must be stored in a freezer that: 1) can maintain an average temperature of **-15°C (+5°F) or colder**; 2) has a **separate insulated door** (*dorm-style cube refrigerators and water cooler refrigerators are not adequate*); and 3) is **frost-free**. Providers should be maintaining a daily log of freezer temperatures to ensure that their freezer is cold enough to store vaccines at their recommended temperatures.

The manufacturer's package insert states that varicella vaccine may be stored at refrigerator temperature (2–8°C, 36–46°F) for up to 72 continuous hours *before being reconstituted.* (Once reconstituted, it must be discarded if not used within 30 minutes.) Varicella vaccine that has been moved to the refrigerator **cannot be refrozen;** if not used within 72 hours it must be discarded.

The Massachusetts Immunization Program **does NOT recommend** this practice. However, if you do move varicella vaccine from the freezer to the refrigerator, carefully label it with the date and time you moved it. Check the label carefully before reconstituting the vaccine to make sure that you don't inadvertently give a dose of non-potent vaccine.

TB Update

Protease Inhibitor Interactions with Rifamycins

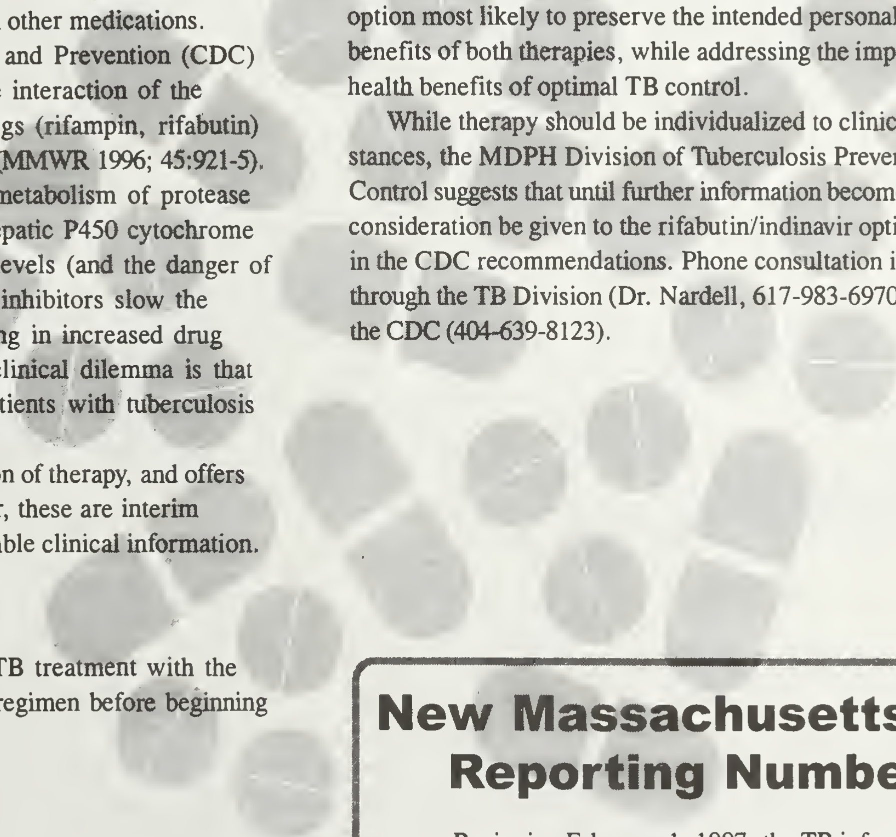
CDC Interim Recommendations

The new protease inhibitor class of drugs: saquinavir (Invirase), ritonavir (Norvir), and indinavir (Crixivan) represent an advance in the treatment of HIV infection. These potent inhibitors of viral replication, combined with older anti-HIV drugs, provide longer-term suppression of the virus. Treatment is associated with elevated T-lymphocyte counts and improved immune function.

These drugs are not perfect, however. Treatment requires scrupulous compliance with the correct dose or viral resistance may develop. In fact, stopping therapy is preferable to lowering dose below recommended level or missing more than a few doses. These medications also have varied and significant side effects, although it must be noted that the majority of patients do not have side effects. Additionally, these drugs tend to have potent and significant interactions with other medications.

The Centers for Disease Control and Prevention (CDC) recently issued a clinical alert on the interaction of the rifamycin derivative tuberculosis drugs (rifampin, rifabutin) with the new protease inhibitor drugs (MMWR 1996; 45:921-5). In general, the rifamycins increase metabolism of protease inhibitors through induction of the hepatic P450 cytochrome oxidases resulting in subtherapeutic levels (and the danger of viral resistance), while the protease inhibitors slow the metabolism of the rifamycins resulting in increased drug levels (and potential toxicity). The clinical dilemma is that optimal treatment is essential for patients with tuberculosis and HIV infection.

The CDC suggests individualization of therapy, and offers several management options. However, these are interim recommendations due to limited available clinical information.



For TB patients not yet on protease inhibitors:

The CDC suggests completing TB treatment with the standard 4-drug, rifampin-containing regimen before beginning a protease inhibitor.

When protease inhibitors have already been started:

Option 1: Discontinue the protease inhibitor until 4-drug TB treatment is complete. The rationale is that the risks of discontinuing protease inhibitors are unclear at this time (but appear to be lower than the risk of subtherapeutic levels), while the risks of using drug regimens without rifampin for rifampin-susceptible TB are well known: treatment failure, drug resistance, progression of HIV infection, and possible TB transmission to others. A major concern with this option is that interruptions in protease inhibitor therapy can result in ground lost to immune compromise.

Option 2: Minimize interruption of protease inhibitor therapy by treating with rifampin only until there is a bacteriologic response, usually within 3 months, and then switch to INH and ethambutol for 16 months, while reintroducing the protease inhibitor. This option may compromise efficacy of both therapies.

Option 3: Continue protease inhibitor therapy with indinavir together with a 9-month, 4-drug TB regimen containing rifabutin instead of rifampin. The rationale here is that indinavir and rifabutin have the least interaction among the combinations of drugs currently available. Indinavir approximately doubles the levels of rifabutin, while rifabutin reduces the levels of indinavir by about a third. However, when the dose of rifabutin is reduced to 150 mg per day in patients on indinavir, therapeutic levels of both drugs have been achieved. Currently, this is the option most likely to preserve the intended personal health benefits of both therapies, while addressing the important public health benefits of optimal TB control.

While therapy should be individualized to clinical circumstances, the MDPH Division of Tuberculosis Prevention and Control suggests that until further information becomes available, consideration be given to the rifabutin/indinavir option presented in the CDC recommendations. Phone consultation is available through the TB Division (Dr. Nardell, 617-983-6970), or through the CDC (404-639-8123).

New Massachusetts TB Reporting Number

Beginning February 1, 1997, the TB information reporting number for Massachusetts cases will change to:

1-888-MASSMTB
1-888-627-7682

Yes, it's flu season

Our first case of influenza in the Bay State occurred in early November, approximately one month earlier than last year. However, this early start does not necessarily mean that the flu will be more common or even more serious this year compared to last year. The case, a three-month old baby boy, had fairly typical flu symptoms including sudden onset of high fever on November 9, cough, vomiting, and mild diarrhea. The viral strain has been identified as influenza A, subtype H3N2 (Wuhan-like). This strain and all others identified to date nationwide appear to be covered by this year's formulation of flu vaccine.

Nationwide, levels of flu activity were typical during September and October. In most cases the activity was considered sporadic. By mid-December, influenza activity had been reported in numerous states.

To help reduce the spread of influenza within the Commonwealth, the Massachusetts Immunization Program (MIP) distributed over 590,000 doses of flu vaccine this fall. The MIP recommends vaccination for everyone 65 years of age and older; anyone with heart, lung or other chronic diseases; residents in long-term care facilities; and others for whom influenza and its complications may be serious. Vaccination is also recommended for the household members and health care providers of people at risk for complications of influenza infection.

Shots can be given at any time during the flu season, which can last into March. The MIP is urging people to be vaccinated as soon as possible as it takes a few weeks for immunity to develop. Remember: ***It's never too late to vaccinate!***

COMMUNICABLE DISEASE UPDATE
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Ten-year anniversary

Working Group on Foodborne Illness Control

Representatives from the Divisions of Epidemiology and Immunization, Food and Drugs, and Diagnostic Laboratories participate in the Working Group on Foodborne Illness Control (WGFIC). The group was formed in 1986 in an effort to streamline foodborne disease investigations that often involve the three divisions. The main functions of the WGFIC are to:

- respond to consumer complaints regarding potential foodborne illness,
- assist and train local boards of health in investigations of foodborne illness outbreaks,
- identify causes of outbreaks through facility inspection, laboratory testing, and epidemiologic analysis, and
- make recommendations for the prevention and control of foodborne illness.

Through the years, the group has played an integral part in developing several policies regarding foodborne illness trends. For example, in the late 1980s an increase in egg-associated cases of salmonellosis in the Northeast led the group to develop a policy restricting the use of shell eggs in long-term care facilities. The WGFIC is preparing a reference manual on foodborne illness investigation and control for local boards of health and is initiating a shared computerized foodborne illness database.

MASS. HS 30.1703: 5/2 ✓

For Healthier Lives

Massachusetts Department of Public Health

Communicable Disease Update

Newsletter of the Bureau of Communicable Disease Control

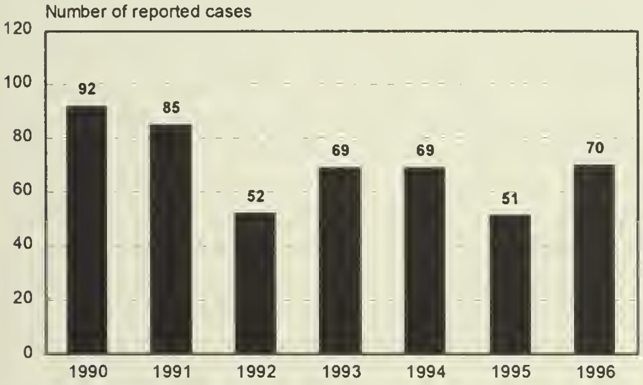
Volume 5 Issue 2 Spring 1997

Meningococcal disease: When might we vaccinate?

Cases of meningococcal illness in Massachusetts have been highly publicized over the last few months. Although media attention has led many to believe the occurrence of the illness has increased, ongoing surveillance indicates that sporadic cases of meningococcal illness continue to occur throughout the state at a rate comparable to previous years (see graph below). Surveillance of meningococcal disease includes determination of the serogroup causing disease and analysis of the occurrence of disease by person, place and time.

Meningococcal Disease

Massachusetts, Reported Cases 1990 - 1996



*1996 data are provisional

There has also been speculation about the possible use of meningococcal vaccine for prevention. A meningococcal vaccine (against serogroups A, C, Y, W-135) is available, but routine vaccination is not recommended in the U.S. The Advisory Committee on Immunization Practices (ACIP) recommends meningococcal vaccine for travelers to countries with endemic disease and for certain high-risk individuals.

The ACIP has recommendations for the possible use of vaccine in cases of either institution- or community-based outbreaks of meningococcal disease. Vaccination may be considered when at least three cases of meningococcal disease of the same serogroup occur in individuals who are **not** close contacts of each other **and** the rate of disease is greater than 10 cases per 100,000 population. The cases must be part of a definable population (an institution or community) and have onsets of illness within a three-month period. The serogroup causing illness must be included in the vaccine. Many experts question the value of vaccination even for such outbreaks of meningococcal disease. In outbreaks

(Continued on page 5)

Pertussis on the rise

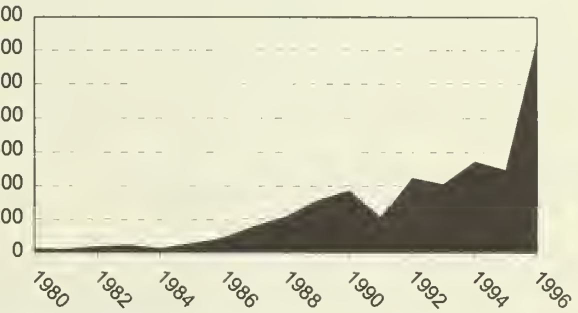
Adolescents at risk

Reported cases of pertussis in Massachusetts reached 1,243 in 1996. This is a 2.5-fold increase over the 492 cases reported in 1995 (see graph below) and is the highest number of cases reported in the state since 1958. Since reporting began in 1894, the all-time high was 13,333 cases in 1937, before the vaccine was available. The recent increase in reported cases is likely due, in part, to improved surveillance and greater awareness of pertussis among health care providers.

However, based on national morbidity reporting data and state-based laboratory testing data, the true incidence may also be increasing. Nationally, reported cases increased to over 6,900 for 1996. Pertussis occurs in cycles, with peaks every three to four years, and 1996 may mark the beginning of a persistent upswing.

Pertussis in Massachusetts

1980 - 1996*



*1996 data are provisional

The number of specimens submitted to the State Laboratory Institute (SLI) for diagnostic testing in 1996 roughly doubled since 1994. The *proportion* of specimens with positive results also increased, suggesting that pertussis incidence in Massachusetts is, in fact, on the rise. The percentage of cultures submitted that tested positive rose from 4.2% in 1994 to 8.9% in 1996.

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Epidemiology Update

New quantine policy for ferrets

Now that ferret ownership is legal in Massachusetts, more people are likely to be bitten, scratched or otherwise exposed to ferrets. In light of studies on shedding periods of rabies virus in ferrets, the Massachusetts Department of Public Health has decided that, **effective immediately**, a 10-day rabies quarantine period for ferrets will be recommended under certain circumstances.

According to the new policy, ferrets that bite or scratch people or whose saliva touches a person's mucous membranes, fresh cuts, or scratches will be quarantined for 10 days, just like dogs or cats. Pet store ferrets that expose people will not be released to new owners until the 10-day quarantine period is complete. The purpose of the quarantine is to observe the animal for signs of rabies. A ferret that has rabies virus in its saliva should show signs of rabies within 10 days.

If any of the following circumstances exist, the ferret should be euthanized immediately and tested for rabies instead of being quarantined for 10 days: 1) the ferret has signs consistent with rabies (*e.g.*, neurologic signs), or it develops signs consistent with rabies during a quarantine period; 2) the ferret is demonstrating behavior that is unusual for the particular ferret; 3) for any reason, the ferret dies during the 10-day quarantine period. For rabies testing, the head should be submitted to the Massachusetts State Laboratory Institute.

This quarantine period would apply regardless of the vaccination status of the animal. Ferret quarantines are handled by the Massachusetts Department of Fisheries, Wildlife and Environmental Law Enforcement (617-727-3151).

Never too old for Fifth Disease

Fifth Disease is a well-recognized and relatively common infection, with frequent outbreaks among children in the spring. The diagnosis of Fifth Disease may be overlooked in adults, however, because its presentation may differ and because it is thought to be only a childhood disease. Many adults are immune because they were infected in childhood, symptomatically or asymptomatically. However, up to 50% of adults may still be susceptibleto human parvovirus B19 (the etiologic agent of Fifth Disease). Parvovirus B19 infection in pregnant women can cause fetal hydrops. The estimated risk of fetal death under 10% for infections in the first half of preg-nancy and negligible in the second half, and infection during pregnancy has not been reported to cause congenital anomalies.

Parvovirus B19 infection in adults can present as erythema infectiosum (EI), characterized by mild systemic symptoms (sometimes with fever) and frequently a rash involving the face and neck (often with red cheeks and circumoral pallor) and the limbs and trunk (maculopapular, lace-like rash). The rash can recur and fluctuate in intensity with external stimuli (*e.g.* temperature, exposure to sunlight) for weeks. The rash may look like rubella. Arthralgia and arthritis, sometimes in the absence of EI, occur commonly in adults, especially women. Parvovirus B19 infection can also cause a mild respiratory illness with no rash or joint symptoms. Transmission of the virus is believed to involve respiratory secretions. Most transmission, if not all, occurs before rash onset. The virus is occasionally transmitted through blood transfusions. The incubation period to development of prodromal symptoms and then rash is generally 4–14 days, but it can be as long as 20 days.

What's biting you?

Massachusetts and other New England states documented two to three times as many cases of Lyme disease and other tick-borne diseases in 1996 as in 1995. Although the reason is uncertain, it was likely due to the wet weather in the spring and summer of 1996, which provided ideal habitat for ticks. Whether cases of Lyme disease and other tick-borne diseases (such as Rocky Mountain spotted fever, babesiosis, ehrlichiosis, and tularemia) will be higher than usual in 1997 remains to be seen.

With the arrival of spring, ticks seek mammalian hosts for blood meals. All Massachusetts residents should understand that tick bites are risky and take measures to prevent them.

The deer tick, which carries Lyme disease, babesiosis, and ehrlichiosis, is the tick most likely to bite humans. This tick is the size of a poppy seed, so it is easy to overlook. To prevent tick bites, take the following precautions:

- Don't walk bare-legged in tall grass, dunes, or woods where ticks may live.
- If walking in tick habitats, wear a long-sleeved shirt, long pants tucked into socks, and closed-toed shoes.
- Light-colored clothes will make the dark brown ticks easier to spot.
- Use an insect repellent containing no more than 30–35% DEET on adults and no more than 10–15% DEET on children. **Do not use insect repellants on infants.** On children, do not apply repellent to the hands or face and wash all skin surfaces treated with insect repellent when no longer needed. Alternatively, apply permethrin-containing repellents to clothing (not skin) according to the manufacturer's directions.
- Check for ticks every time you come in from outdoors, and check your children often. Look for ticks in all joint areas, along the hairline, behind and in the ears, in the navel, and on the thighs.
- To remove a tick, use tweezers to grasp the tick's mouthparts firmly, and pull it straight out using gentle, steady pressure. Squeezing or squashing the tick can force bacteria into the wound. Do not use petroleum jelly, nail polish remover or heat to remove the tick.

STD Update

National STD conference

More than 1,200 people attended the three-day National STD Conference in December to review the national prevention effort, project trends and plan initiatives.

Institute of Medicine report: "Silent Epidemic: STDs in America" reviewed the high rates of STDs in the US compared to other industrialized nations and explored some of the reasons. Issues raised included: the poor understanding of the cost and social impact of STDs; the need for improved clinical education and greater access to comprehensive sex education; poor recognition of the role of STD prevention in HIV prevention; and lack of advocacy for STD prevention. A summary of the report is available from the Division of STD Prevention, (617) 983-6952.

Interactions with HIV: Lesion STDs are an independent risk factor for contracting HIV infection. Dramatic findings from Africa demonstrated that preventing or curing lesions reduced HIV transmission by 41%. Copies of this article are available from the Division of STD Prevention.

Managed Care: The number of poor and uninsured now being covered by managed care organizations raises many questions. What is the future for specialized public health services like STD clinics? Who will set standards of care? Will people be diagnosed or treated presumptively? Will screening be defensible from a cost perspective? Who will be responsible for partners? These, among other questions, need to be resolved as managed care coverage continues to expand rapidly.

Women and STDs: Focus on women, especially the need for women-controlled prevention, was a theme throughout the conference. Presentations included an update on the female condom and microbicide research (both within the US and abroad), as well as studies of behavioral components of prevention programs for women.

Clinic Expansion: Clinics need to link with community-based organizations for active outreach and marketing. They also need satellite locations to increase accessibility.

Behavioral Theory: Incurable viral STDs have refocused interest on the determinants of behavior change, which are at the core of prevention efforts. This is a paradigm shift for STD services, which have historically been based on a clinical, curative approach.

Prisons: Prevention programs need to be enhanced in our nation's prisons and jails.

Clinical Education: STD prevention is enhanced by clinicians who are able to assess risk and are quick to suspect and diagnose STDs. These clinicians need the support of skilled laboratory professionals. More educational opportunities need to be available to such professionals.

Advocacy: STD prevention efforts receive little political advocacy. Sensitivity about sex and sexuality, plus an attitude of blaming the victim, make STDs seem like political quicksand. Advocacy is important to generate more support for prevention and control initiatives.

Not for guys only

A female-controlled condom

STD clinics have obtained 15,000 female condoms for distribution. The female condom is a thin polyurethane (not latex or rubber) sheath or "condom" that is placed inside a woman's vagina with the closed end placed inside on the cervix, and the open end outside the vagina. Both ends have flexible rings to keep the condom in place.

The female condom has several advantages. It can be inserted prior to any sexual activity and gives women more control than traditional condoms. In addition, no medical appointment, prescription or fitting (such as for diaphragms) is required. Some studies indicate that protection is used more often when the female condom is included as an option.

Some people have been concerned that the female condom may be difficult to use. However, a large study is currently being conducted by the University of Alabama in which the female condom is supplied free, along with counseling and education. Initial results indicate that the female condom can become more user-friendly with familiarity and practice.

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For a free subscription, please call Debra Thimas at (617) 983-6800.

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You be the epi!

You are the school nurse at an elementary school. A fourth-grade teacher sends you a child who has a red rash near the scalp that began that afternoon. He has a temperature of 100.8°F and lesions that are mostly maculopapular, although a few are vesicular. You suspect chickenpox and promptly send him home. The next day, his parents call to report a physician diagnosis of chickenpox.

After interviewing the teacher, you learn that the case worked closely with several other pupils on an art project over the past two days, and tutors several kindergarten students every day after school. His teacher is two months pregnant and unsure of her chickenpox history.

Your records show that most fourth graders have a reliable history of chickenpox or varicella immunization. However, one of the exposed kindergarten students has not had varicella, and her varicella vaccination status is unknown. You learn that this child lives with a younger sibling who is immunocompromised.

Given the high communicability of varicella and potential for complications in certain higher-risk groups, what should you do regarding the case and his close contacts at the school?

Analysis

The case should be excluded from school until the end of his infectious period, until all lesions are crusted over (usually five days after rash onset). He exposed a few healthy susceptible fourth graders, especially those working on the art project. You should make parents aware of this possible exposure to varicella in that classroom.

The pregnant teacher should be advised to contact her obstetrician regarding serologic testing for varicella immunity. The use of varicella immune globulin (VZIG), if administered with 96 hours after exposure, can help to modify disease and decrease risk of severe complications of chickenpox, (e.g., pneumonitis, encephalitis, hepatitis, pancreatitis).

The susceptible kindergarten student is a household contact of an immunocompromised individual whose immune status against varicella is unknown. The parents of this susceptible student should be informed of the exposure and advised to consult with the health care provider of their immunocompromised child. This provider will determine the child's susceptibility and advise on any control measures. If susceptible, the immunocompromised child is at great risk for serious complications of chickenpox, which is why the kindergarten student should be vaccinated against chickenpox. While it is not currently known whether post-exposure vaccination will prevent illness in the kindergarten student or prevent transmission to her sibling, there is no harm in vaccinating a person who might be incubating varicella virus.

CONFIDENTIALLY SPEAKING

Electronic modes of data storage, manipulation and transmission are having a dramatic impact on how we conduct business. The new technology has also created new issues and increased concern regarding confidentiality. However, new technology has also offered some solutions to the problems it raises.

The State Laboratory Institute (SLI) is reinforcing and upgrading data security. If you visit the SLI, you will notice changes affecting parking and building security. All employees are being issued new identification badges containing encrypted magnetic strips. These badges will provide access to the parking areas, which are being fitted with gates. Visitor parking will be restricted to an area in front of the building. The badges will also be needed to enter the building. Eventually, smart cards will control entry to parts of the building where data are stored. Visitors will stop at the front desk to sign in, and they will be escorted to their destination. Space in the building is being re-configured so that we can eliminate the use of trailers, which are difficult to secure from break-ins.

The Bureau of Communicable Disease Control is also in the midst of reviewing its own policies and procedures for protecting confidentiality. A Working Group has been convened to update the Bureau's Confidentiality Policy. This group will examine: physical measures; data access (*e.g.*, use of networks); passwords for databases and individual files; data transmission (*e.g.*, faxes in secured areas with limited access); data release (the balance between protecting individual confidentiality vs. public right to know); materials disposal (shredded, burned or tossed into the trash); and research projects.

"Confidentially Speaking" will be a recurring column for discussion of these issues. Perhaps it will prompt some review of how you protect information. We would also welcome hearing from you about some of your deliberations and solutions, so we might pass them along to all of our readers. "Loose Lips Sink Ships" is a slogan and exhortation from another time, but it is no less true for us today.

Pertussis

(Continued from page 1)

For serologic specimens, the percentage positive increased from 14% in 1994 to 19.3% in 1996.

Nationally, as well as in Massachusetts, the number of pertussis cases has been gradually rising since the late 1970s. One hypothesis is that, with pertussis vaccine coming into widespread use in the 1950s, the proportion of people who have natural lifelong immunity from having had the disease is decreasing. In contrast to natural immunity, protection from vaccine wanes and is absent 12 years after the last dose of DTP, which is usually given at kindergarten entry. This has resulted in a susceptible population now predominantly made up of adolescents and adults. Waning herd immunity allows the organism to establish itself and spread. The upward trend in pertussis cases would therefore be expected to continue until a vaccine is licensed for use in those seven years of age and older.

The pattern of age groups affected by pertussis is also changing. Nationwide, the proportion of cases occurring in people older than 10 years has increased from about 10% in the 1980–83 period to about 30% in the 1994–96 period. In Massachusetts, most reported cases occur in adolescents. In 1996, 64% of cases were in the 11–19 year old age range, up from 54% in 1995. However, reporting bias may contribute to the high proportion of adolescent cases; health care personnel in school settings are able to do more careful surveillance than is possible in most adult settings.

Institutions may facilitate disease transmission. In 1996 there were 19 pertussis outbreaks (≥5 clustered cases) in Massachusetts. Of these, 17 occurred in high schools or middle schools. (See related article, "Pertussis Epi-Aid.") The remaining two outbreaks occurred in a residential home for the developmentally disabled and an acute-care hospital. Of additional concern, 22 cases of pertussis occurred in health care settings and involved both staff and patients.

Given recent epidemiologic trends, pertussis must be considered in the differential diagnosis for all individuals who present with a prolonged cough illness. Adolescents and adults can transmit pertussis to unimmunized and underimmunized infants and young children, who are still at greatest risk for complications (including pneumonia, seizures, and death). Although waning immunity leaves adolescents and adults susceptible, age-appropriate immunizations will help limit the occurrence of disease in young children.

Pertussis Epi-Aid: Helping hand from CDC

By Raffi Tachdjian, MPH
National Immunization Program, CDC

The U.S. Centers for Disease Control and Prevention (CDC) was asked by the Massachusetts Department of Public Health (MDPH) to assist with the investigation of a school experiencing a pertussis outbreak. The main objectives of the Epi-Aid were to assess risk for pertussis disease and evaluate control measures in school settings.

In this suburban high school chosen for more extensive investigation, 77 (7.6%) cases of pertussis were detected among a total of 1,009 students. Of these cases, 11 were culture proven, 17 were serology positive, and 35 cases were epidemiologically linked to either a culture or serology positive case. We assessed attack rates by grade level, sports team, and time since last vaccination for all students attending during school year 1996–97. Help was provided to the CDC team by the school nurses. Analysis is ongoing.

The MDPH and CDC are collaborating on a Pulsed-Field Gel Electrophoresis (PFGE) study to determine whether this is a community- or a school-based outbreak of pertussis. PFGE typing is a state-of-the-art laboratory method that identifies the specific strain of *Bordetella pertussis*. Seventy-nine culture positive cases, some of which were household contact cases as well as sporadic cases, were identified from around the state, and cultures are being shipped to the CDC laboratory for PFGE strain identification. The results of these analyses will be combined with epidemiological data to evaluate whether strains circulating in the school were different from strains circulating in other regions of Massachusetts.

Streamlining of surveillance efforts is currently being discussed, in hopes of expediting case investigations during outbreaks. The outcomes of the Epi-Aid should help improve our understanding of pertussis epidemiology in school settings, help determine the roles of waning vaccine-induced immunity, provide important information on outbreak control, and help improve the efficiency of pertussis case investigations.

AIDS news

Readers of *Communicable Disease Update* have asked why we do not carry information on AIDS. The reason is that the Massachusetts Department of Public Health already publishes a newsletter specific to this topic, the *AIDS Quarterly Review*. This publication is a collaboration between the HIV/AIDS Bureau and the AIDS Surveillance Program. For a free subscription, please call the AIDS Surveillance Program at (617) 983-6560.

Meningococcal

(Continued from page 1)

involving a small, defined population (*e.g.*, a school), chemoprophylaxis may be a preferred means of prevention.

Surveillance for meningococcal illness is ongoing, with a high priority placed on the identification of potential outbreaks. Prompt reporting of suspect and confirmed meningococcal disease and submission of bacterial isolates to the State Laboratory Institute for grouping will aid in the rapid identification of potential outbreaks. If you have questions or would like copies of the ACIP statements on meningococcal disease, please call the Epidemiology Program at (617) 983-6800.

Immunization Update

Springfield's new team targets tots

During the spring of 1994, the mayor, health department, health care providers, business leaders and human service executives, began looking at ways to create a healthier Springfield. Meeting monthly for the past two years, the Springfield Community Health Planning Steering Committee has completed its first planning cycle.

Recognizing that Springfield faces numerous complex health, social and economic problems, the Committee realized that no single organization could solve them alone. With this in mind, a not-for-profit organization, Partners for a Healthier Community (PHC), was formed in October of 1996 to oversee the first three child- and family-focused programs: 1) Immunization Tracking, Outreach and Education Program; 2) Comprehensive School Health Program; and 3) Youth Development Program.

PHC is currently implementing outreach and education projects as a first step towards improving the well-being of preschool-aged children in Springfield, according to Don Frigon, of Baystate Health Systems. In Springfield, rates of teen pregnancy, sexually transmitted diseases, and infant mortality are in many cases double the state average. Pilot projects to reach and support vulnerable families are underway. The goal is to achieve 90% immunization rates for children under two, to link families to health care providers, and to conduct neighborhood outreach using residents as community health advocates.

The SHOTS (Starting Healthy: Our Task for Springfield) Immunization Program is the first step toward improving the health of Springfield's neighborhoods. This immunization program is designed to train community health advocates, establish a model provider network, and develop a computer system to track immunization histories.

For more information, contact Partners for a Healthier Community, P.O. Box 4895, Springfield, MA 01101-4895 or call (413) 784-2272.

Hepatitis B and rubella hospital record review

To prevent hepatitis B infection and congenital rubella syndrome, the CDC Advisory Committee on Immunization Practices, the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics recommend prenatal HBsAg and rubella testing, and hepatitis B and postpartum rubella immunization. The Massachusetts Hepatitis B Prevention Project conducted a hospital record review on a random sample of 157 paired maternal and infant hospital records statewide to evaluate compliance with these recommendations.

The results indicated that: 98.1% of pregnant women were tested for HBsAg and 99.4% were tested for rubella. While 88.5% of the infants received hepatitis B vaccine prior to discharge, only 60.1% of those infants had documentation of the correct dose of vaccine; 66.6% of rubella-susceptible women were vaccinated prior to discharge.

Although these results indicate high compliance with state and federal recommendations, improvement is needed in documentation of hepatitis B vaccine doses and immunization of rubella-susceptible postpartum women.

Recommendations

- If maternal HBsAg status is unknown, test the mother and immunize the infant with a dose of hepatitis B vaccine appropriate for an infant born to a HBsAg-positive mother. If the mother is found to be HBsAg-positive, administer HBIG as soon as possible, within 7 days of birth.
- Document the dose (in micrograms) and manufacturer of hepatitis B vaccine in the newborn's record.
- Immunize all rubella-susceptible postpartum women with MMR vaccine prior to discharge.

To obtain a detailed summary, sample standing orders for hepatitis B and MMR vaccination, please call Louisa Bell Paushter at (617) 983-6800.

New sequential polio vaccine schedule

The Advisory Committee on Immunization Practices (ACIP) recently recommended a sequential vaccination schedule of two doses of inactivated poliovirus vaccine (IPV) followed by two doses of oral poliovirus vaccine (OPV) for routine vaccination of children in the U.S. The ACIP made this recommendation for the following reasons: 1) paralytic polio from indigenously-acquired wild poliovirus has not occurred in the U.S. since 1979; 2) progress toward global eradication has reduced the risk for importation of wild poliovirus into the U.S.; and 3) vaccine-associated paralytic poliomyelitis continues to occur.

The Massachusetts Immunization Program (MIP) now provides IPV and OPV for all children. Both vaccines are ordered by using the Vaccine Order Form. Providers no longer need to use the *Enhanced-Potency Inactivated Poliovirus Agreement* to order IPV or the *E-IPV Doses Administered Report* to record IPV usage. Both OPV and IPV usage should now be recorded on the standard *Vaccine Usage Report* (green bubble sheet).

While the sequential schedule is recommended, an all-IPV or all-OPV schedule is acceptable. Parents should be informed of the polio vaccines available, the three alternative schedules, and the basis for the polio vaccination recommendations. Revised Vaccine Information Statements and other polio vaccine information materials are available through the regional immunization offices.

TB Update

Reaching out

Outreach Workers (ORWs) have a significant role in many health care programs. Since 1984, the Division of Tuberculosis Prevention and Control has been fortunate to work with and learn from its outreach staff. Historically, ORWs have been recruited from communities at high risk for tuberculosis (TB). Currently, there are seventeen ORWs, six of whom are permanently assigned to the Refugee & Immigrant Health Program. They are from varied cultural backgrounds.

ORWs are instrumental in locating patients lost to follow-up, educating patients, encouraging patients to complete recommended treatment, assisting local public health nurses in screening close contacts, and establishing and maintaining trusting one-to-one relationships with patients that help them adhere to prescribed treatment regimens. They also provide interpreter services in both the clinic and the community.

In response to rising TB case rates and increased drug resistance, the CDC encourages the use of Directly Observed Therapy (DOT) for persons with active TB disease. Adherence to therapy reduces the risk of drug resistance and increases completion of treatment. DOT may be performed by nursing staff or other trained health care professionals and involves watching a patient take each dose of prescribed antituberculosis medication. A number of states adopted universal DOT protocols; that is, all patients diagnosed with active disease are placed on DOT.

Massachusetts chose an individualized approach. Accordingly, each patient is assessed for factors that may indicate a potential for nonadherence; *e.g.*, substance abuse, history of nonadherence. If there is no identified risk, patients are placed on self-administered therapy. When needed, DOT is usually performed in the patient's home, although it can be administered at the clinic or health department. ORWs are invaluable in the success of DOT programs and are given specific training regarding DOT and antituberculosis medications, and related side effects. DOT assists patients in completing treatment, and equally important, the ORWs give support and encouragement to patients.

"Often, I visit this family early in the morning and talk to them," one of the ORWs recently stated. "They look forward to my visit. I am a part of these people's lives. And that means a lot to the people I am serving, and it means a lot to me."

Northeast region:

Tuberculosis Surveillance Area (TSA) III

TSA III Nurse: Nancy Taylor Flynn, RN, BSN

Epidemiology: In 1996, 41 cases of *Mycobacterium Tuberculosis* were identified in TSA III as compared to 69 cases in 1995.

Clinical Services: In 1996, the clinic in Lynn merged with the Northshore Pulmonary Clinic located at Salem Hospital. Shuttle buses provide transportation for patients from Lynn.

The geographical boundaries of the TB regions were changed to match those of other state agencies. Lynnfield, Melrose, North Reading, Reading, Stoneham and Wakefield are now part of TSA III. These towns were referred to the Middlesex County Hospital TB clinic for services prior to the clinic's closure in late 1996. Patients from these towns have now been reassigned to other existing clinics until a new clinic site is established. Other clinic sites in TSA III are at Lawrence General Hospital, Malden Hospital, and Saints Memorial Hospital in Lowell.

Educational Activities: Twenty-six educational inservices were provided in 1996, primarily to employees in long-term care facilities, hospitals, and Visiting Nurse Associations. In addition, ten educational inservices have been provided to date in 1997. The regional TB update was held at Lawrence General Hospital in September 1996. The next update is tentatively scheduled for September 24, 1997; location to be announced.

Outreach Activities: Community outreach workers (ORW) for TSA III are Antonio Ramos, Joanny Perez and Bill Wong. Bill works with the Chinese population, primarily in Malden; Antonio and Joanny speak fluent Spanish. Carmen Gorman, a former ORW in TSA III, has recently been promoted to the Prevention Coordinator for TSAs II and III. Among her new duties, she will conduct source case investigation follow-up for infected children 4 years and younger.

We are on-line

The Massachusetts Department of Public Health's web site is up and running. It includes a variety of communicable disease fact sheets from the Division of Epidemiology & Immunization and the Division of Sexually Transmitted Disease Prevention that can be viewed and printed. Other material that can be accessed are editions of *The Reporter* from the Division of Food & Drugs and vital statistics from the Division of Vital Statistics. Much more information will be available in the future, including editions of *Communicable Disease Update*. The MDPH homepage address is:

http://www.magnet.state.ma.us/dph/

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Communicable Disease Updates: 1995 vs. 1996 Reported Cases

DISEASE	1995	1996*	% change from 1995
AIDS	1098	648	-41%
Botulism	1	0	-100%
Campylobacter	1,588	1,462	-8%
Chlamydia	7,402	6,791	-8%
Cryptosporidiosis	131	84	-36%
E. coli O157:H7	118	162	+37%
Giardiasis	1,040	954	-8%
Gonorrhea	2,658	2,163	-19%
Hepatitis A	161	226	+40%
Hepatitis B (acute)	114	104	-9%
Lyme Disease	189	375	+98%
Measles	5	12	+140%

* Preliminary data. Reporting not yet complete.

DISEASE	1995	1996*	% change from 1995
Invasive Meningococcal Disease (Neisseria)	51	70	+37%
Pertussis	492	1,243	+153%
Rabies (animal)	401	114	-72%
Rubella	11	21	+91%
CRS**	0	0	—
Salmonellosis	1,862	1,655	-11%
S. typhi (Typhoid)	31	18	-42%
Shigellosis	324	263	-19%
Syphilis (early)	223	262	+17%
TB	330	262	-21%

** Congenital Rubella Syndrome

Save the dates!

Massachusetts Immunization Action Partnership (MIAP) Annual Meeting

May 1, 9–3:30 PM, Best Western Hotel, Marlboro. For more information call Mimi Larzelere at (617) 624-6146.

Infection as a Community Problem

May 28. Sponsored by the Massachusetts Public Health Association and the MDPH Bureau of Communicable Disease Control. Part I, 8 AM–12 noon, $25: Prevention of foodborne, waterborne, airborne and vectorborne diseases and new issues in rabies control. Part II, 1:30–3:30 PM, special optional session, free: Roundtable discussion of recent issues of importance to local boards of health and health department staff. To be held at Tufts Affiliated Health Plan, Waltham. Registration required; CEUs available. For more information call the MPHA at (617) 524-6696.

CDC Satellite Training Course: Epidemiology and Prevention of Vaccine-Preventable Diseases

(Four-day comprehensive course) June 5, 12, 19, and 26, 12–3:30 PM. Special session on June 12: Update on Pertussis and Polio Vaccines. To be held at the State Lab Institute, Jamaica Plain. CEUs available. For more information call Walt Lasota at (617) 983-6834.

Massachusetts Department of Public Health's 1997 Teleconference Series on Infectious Disease:

Enterics: Laboratory & Epidemiology Considerations. May 21, 1–2 PM, $25 fee. Preregistration is required, deadline is May 7, 1997. The only equipment needed to access the programs is a speaker phone. CEU's available.

Gram Positive Organisms: Susceptibility Testing. July TBA

Pertussis: Diagnosis & Surveillance. September TBA

TB Rapid Diagnostics: Practical or Not? November TBA

For more information, call the National Laboratory Training Network, New England Office at (617) 983-6284 or 1-800-536-NLTN (within New England).

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 5, No. 3 Summer 1997

Why report disease?

The key to recognizing and controlling communicable diseases is prompt and accurate reporting by clinicians. Laboratory and hospital reporting are also important, but not all reportable diseases are diagnosed by laboratory criteria, and not all patients with reportable diseases get hospitalized. In addition, laboratory reports do not provide clinical and demographic information needed for disease control and prevention, planning and research. For that, **we depend on the clinician.** Reportable diseases in Massachusetts are specified in *Reportable Diseases and Isolation and Quarantine Requirements* (July 1994); please call (617) 983-6800 if you need a copy.

This article discusses why communicable disease reporting is critical to maintaining public health, how prompt reporting can benefit clinicians, and when the diagnosing physician should call the Massachusetts Department of Public Health (MDPH) even before filing a formal report. In the next issue we'll discuss how to report in detail, including which diseases are reported directly to MDPH instead of to the local board of health.

Why report

Detect emerging disease threats. The key to recognizing new or emerging infectious diseases lies in routine surveillance. Immediate reporting by telephone of what is **not** routine—unusual manifestations of communicable diseases and circumstances involving them, including outbreaks and illnesses not included on the reportable disease list—is also critical to dealing with emerging problems. The outbreaks of *Cyclospora* throughout the country in 1996 were first detected by a few alert physicians and laboratory directors who called their health departments when they saw cases of this unusual pathogen. A nationwide investigation led to the implication of Guatemalan raspberries. Outbreaks like this require concerted efforts that exceed the capacity of any single physician or institution.

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Cyclospora returns

As in 1996, event-associated cases of cyclosporiasis have again been reported in several states, including Massachusetts. Preliminary findings from current investigations suggest that imported raspberries are the likely vehicle of transmission for the majority of outbreaks thus far identified. The Massachusetts Department of Public Health strongly recommends washing all produce before it is eaten.

Cyclosporiasis is a gastrointestinal illness caused by *Cyclospora cayetanensis* and is characterized by frequent watery diarrhea, loss of appetite, nausea, low-grade fever, and other symptoms. Health care providers should request testing for Cyclospora in patients presenting with prolonged diarrheal illness with no other identified cause.

The TB Treatment Unit

A New England resource

Through collaborative efforts of the Division of Tuberculosis Prevention and Control and the MDPH's Lemuel Shattuck Hospital, selected tuberculosis (TB) patients may be referred for inpatient care at the Tuberculosis Treatment Unit (TTU). The TTU, an 18-bed unit within Shattuck Hospital, is reserved for TB patients who do not adhere to therapy after all less restrictive measures are tried; who have medically complex problems that require inpatient care; or who may endanger the health of others in the community.

The TTU is an important component of the comprehensive TB control program. It offers a multidisciplinary team approach for patients who need extra assistance to complete therapy. In addition to traditional tuberculosis care, the unit treats other related medical and psychosocial problems. The multidisciplinary team, composed of hospital staff, state and local health department personnel, and

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Epidemiology

Hepatitis A

Hepatitis A is a highly contagious viral disease that affects the liver and can lead to varying degrees of illness. Symptoms include fever, lack of appetite, abdominal discomfort, diarrhea, dark urine and jaundice. Hepatitis A symptoms commonly last for about three to four weeks, and some people become so sick that they require hospitalization. Hepatitis A virus (HAV) is shed in the stool of an infected person. While person-to-person spread is the predominant mode of transmission for HAV, 3-8% of cases reported in the US since 1983 have been associated with suspected or confirmed foodborne or waterborne outbreaks.

A diagnosis of hepatitis A in a food worker can be a serious and disruptive event. Considering the particular circumstances, such as when the food worker was infectious, whether ready-to-eat food was handled, and the food worker's personal level of hygiene, any or all of the following control and prevention measures may need to be considered:

- administration of immune globulin (IG) to coworkers
- exclusion of coworkers for up to 4 weeks
- notification of patrons at risk through posted notices or press releases and the establishment of clinics to administer IG to those patrons.

Besides the public health risk, the effects on the food establishment can be devastating, leading to lost business and a damaged reputation. Good hygiene is critical to preventing the spread of HAV. Food workers should wash their hands often, during all phases of food preparation and especially after using the restroom. They should avoid bare hand contact with cooked and ready-to-eat foods by using physical barriers such as disposable gloves, utensils, and deli papers. They should never work while ill and should immediately report illnesses to supervisors. Additional measures include the use of IG, which is 80-90% effective in preventing illness if given within two weeks of exposure to the virus. For long lasting protection, however, hepatitis A vaccine is now available and has proven to be nearly 100% effective after 2 doses.

Sucking the fun out of summer

Eastern Equine Encephalitis

Eastern Equine Encephalitis (EEE) is a rare but dangerous viral disease. Since 1938, there have been fewer than 80 people diagnosed with EEE in Massachusetts, and half of those cases occurred that year. EEE is transmitted by a type of mosquito that breeds in swampy areas. The true reservoir of the virus is unknown, but birds are thought likely. Symptoms appear two to ten days after infection, often starting with nonspecific flu-like symptoms progressing to high fever, stiff neck, severe headache, and mental confusion. Encephalitis may follow, and many patients go into a coma within a week. There is no cure; treatment is supportive. EEE is fatal in approximately 30% of cases.

The risk of EEE is highest from late July through September, and the counties most at risk are Middlesex, Plymouth, Norfolk, Bristol, and Essex. However, there was a human case in Hampden County in 1995. The Massachusetts EEE Surveillance Program performs weekly surveillance trapping of mosquitoes to assess the risk. Although Massachusetts had no positive isolates from mosquitoes last year, EEE was identified in Rhode Island mosquitoes near the Massachusetts border. The wet conditions of the past year may increase mosquito activity this summer.

Prevention of mosquito bites remains the most important means of controlling the disease. Mosquito activity is highest during the dawn and dusk hours; if you are outside, wear long-sleeved shirts and long pants (minimize uncovered skin surfaces) and use an insect repellent containing DEET. DEET can be toxic if overused, so always follow the instructions. Do not use insect repellants or DEET products on infants, and do not apply these products to children's faces or hands. Fix holes in your screens, and make sure you don't have standing water near your house. If you follow these steps, you can keep the mosquitoes away and enjoy summer activities.

Family planning & STDs

Focus of fall conference

This fall's Annual Conference of the STD Division and the Prevention Training Center of New England will focus on the interrelationship between family planning and STD prevention services.

Both services provide opportunities to help clients protect their reproductive health. For many clients, preventing both pregnancy and STDs is the goal but the interaction of these two issues has become increasingly complex. For example, birth control pills may contribute to cervical changes that increase risk for acquiring chlamydia. In turn, untreated chlamydia can cause sterility.

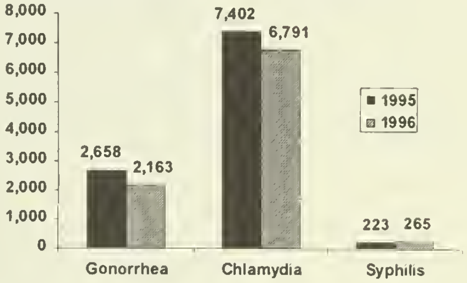
The soon-to-be-published revised *STD Treatment Guidelines,* which clarify some complex issues in clinical management, will be reviewed at the conference. Since the Division recognizes the critical need for counselors to be familiar with both pregnancy and STD prevention, STD clinic staff will be required to attend the annual conference.

The conference will be a joint effort of the Prevention Training Center (the regional training arm of the Division), MDPH's Family Planning Unit, and the John Snow Research and Training Institute (the family planning trainer for New England).

STD rates keep dropping

Massachusetts continues to make progress in preventing the spread of sexually transmitted diseases. Reported gonorrhea reached the lowest level since 1959. It declined 19% from 1995 to 1996, and 71% since 1990 (7,527 reported cases). Chlamydia declined 8% from 1995 to 1996, and 45% since the peak of 12,251 cases reported in 1990.

Reported Cases, 1995-96



In contrast, syphilis increased 19% from 1995 to 1996. Some of this increase is attributable to the recent extension of syphilis screening services to all county jails. Despite this small but troubling recent increase, total infectious syphilis has declined 77% since the peak of 1,173 cases in 1990.

Declining trends suggest that safer sexual behaviors are increasing. Analysis indicates that the highest risk for disease is among the urban poor, with adolescents at particular risk.

Last year, the National Institute of Medicine issued a landmark report entitled *The Hidden Epidemic: Confronting STDs in America*. This report emphasizes that the scope, impact and consequences of STDs receive too little recognition. For example, only $1 is spent on STD prevention for every $43 spent on STD-associated medical costs.

Other issues cited in the report include:

- STDs have greatest impact on women, adolescents and infants
- STDs that cause inflammation or sores increase the risk of acquiring HIV
- the US spends $10 billion on STDs (excluding AIDS) and their complications, a cost shared by all citizens via higher health insurance premiums, health care costs, and taxes

The report provides a basic framework upon which state and local STD programs can design services. The Division intends to strengthen STD prevention efforts in Massachusetts by increasing access to clinical care and improving clinical training and screening services.

> **Increased access to clinical care, improved clinical training, and screening services are key to preventing STDs.**

Female condom training

STD Division staff have developed a training program for Prevention Center staff, based on training received from the Female Health Company, manufacturer of the REALITY® female condom. Training videos produced by the manufacturer are also available for borrowing or copying by health care agencies serving women and adolescents. For more information about training or videos, please call Lorraine Peavey, RN at (617) 983-6852.

CONFIDENTIALLY SPEAKING

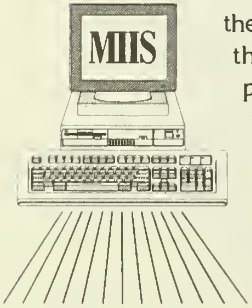
A system you can trust

With privacy of medical information an increasing concern, the development of the Massachusetts Immunization Information System (MIIS) has included special safeguards for confidentiality. A major tenet of the MIIS is the promise that information supplied will remain confidential and will be shared only with the full and informed consent of parents. Parental consent will allow doctors and clinics to send immunization information to the MIIS, which could then share it with three parties: health care personnel who administer immunizations, school health personnel verifying immunization entrance requirements, and public health personnel who may contact families to encourage them to bring their children up to date. No one else will have access to the database. Any public release of information will only be in aggregate statistical form, with no identifying information.

Only authorized people can gain access to information in the MIIS database. Authorized users will be pre-enrolled and required to identify themselves to the system by unique, registered user names and passwords before the system will grant access to any data. Other security features include logs of who has connected with the system, who has accessed individual children's immunization records, and records of unsuccessful query attempts. Parents will be able to find out who has requested or obtained access to their child's record.

The systematic design to ensure confidentiality includes not only documentation of informed consent and technical means of system security described above, but also the commitment of system users. All users will be required to sign agreements which stipulate their confidentiality responsibilities in interacting with the MIIS.

The MIIS has placed the highest priority on the development of systems to maintain data in the most confidential way possible. We believe this effort will encourage parents and providers to participate and help make sure that our children are protected against serious childhood illnesses.



Why report?

continued from page 1

Help stop outbreaks. Prompt reporting can both signal an outbreak and help us evaluate whether control efforts are working. For example, when surveillance data identify hepatitis A in a foodhandler, there is a potential outbreak situation. Distribution of immune globulin (IG) to potentially exposed customers, along with other follow-up measures, often prevents more cases from occurring.

When to Call

Under special circumstances, clinicians should call their local board of health or MDPH immediately, even before formally reporting a case by the usual means. These special circumstances fall into three general categories.

Something unusual *(such as suspect bacterial meningitis; suspect measles; suspect rubella; suspect diphtheria; suspect viral hemorrhagic fever; suspect foodborne illness outbreak).* Call right away.

Patient may have exposed others to a serious communicable disease *(e.g., active tuberculosis in a school or workplace; hepatitis A in a foodhandler).* The MDPH and your local board of health will work with you to determine the public health risk and take the measures necessary to limit additional morbidity.

Advice or information.

- Your patient is a close contact of someone with multidrug-resistant TB.
- You're worried about giving rabies postexposure prophylaxis to a pregnant woman.
- You have a question regarding public health.
- Remember, too, that up-to-date surveillance data are available on request.

Adapted with permission from the New York City Department of Health, *City Health Information*, September 1996, Vol. 15, No. 2.

You be the epi

A 23-year-old male from Africa arrived in the US in June 1995 on a visitor's visa. A chest x-ray taken at Immigration and Naturalization Services in December 1996 showed a cavitary lesion, yet this information was not reported to the state or local health department. In January 1997 he was admitted to a Boston hospital with symptoms and diagnosed with active TB (smear and culture positive), and the case was then reported to the local health department. When the public health nurse made a home visit, she learned that the address given was a friend's home and that the patient was currently living out of state. How would you proceed with this case investigation?

Analysis

The local public health nurse case manager called the identified state health department and confirmed that the patient was currently residing there. Investigation revealed that the patient continued to travel frequently among Massachusetts, his current state of residence and a third state for employment purposes.

His case management required interstate communication and collaboration. Because his adherence to the TB treatment regimen was difficult to document, an interstate Directly Observed Therapy (DOT) plan was initiated. Contact investigations were conducted at all exposure sites and the results shared with all three state health departments.

The patient has moved several times since his treatment plan was initiated, but with cooperation among the patient, the nurses and the outreach worker staff, DOT continues on a consistent basis.

Telephone numbers for reporting

- **Sexually transmitted diseases** (617) 983-6940
  Division of STD Prevention
- **Tuberculosis** (888) 627-7682 (888-MASS-M-TB)
  (answering machine 24 hours/day)
  Division of TB Prevention and Control
- **AIDS** (617) 983-6560
  Division of AIDS Surveillance
- **Other communicable diseases** (617) 983-6800
  (staff on call 24 hours/day for emergencies)
  Division of Epidemiology and Immunization

STD case reporting

Unlike most other reportable diseases, sexually transmitted diseases (STDs) are reported directly to the Division of STD Prevention. Bypassing local boards of health helps protect patient confidentiality by limiting dissemination of sensitive information. A reporting card for clinicians to use is available from the Division by calling (617) 983-6940. These cards provide the Division with the usual demographics and information about follow-up in terms of treatment and partners. However, the cards also serve another function by providing the clinician with information about treatment guidelines and an opportunity to request information or other services from the Division.

Laboratories report significant findings electronically, by fax ([617] 983-6962) to a machine located in a locked area with restricted access, or by mailing computer disks or reports.

Surveillance and epidemiologic data are used for program planning and evaluation. Data analysis tells us what kinds of services are most needed, where and by whom. Data are released only in aggregate form, in routine reports (*Annual, Women and STDs*, and *Adolescents at Risk*) and in reports customized for time, community, age group, racial/ethnic group, or gender.

Empower parents

Teach them about immunizations

Vaccine information statements (VISs) must be given to your patients, their parents or legal representatives and reviewed with them *every time* a dose of vaccine is administered. This is required under federal law (National Vaccine Injury Compensation Act of 1986). Parents and legal representatives have a right and a responsibility to make informed decisions about their children's care, including vaccines. They should have an opportunity to ask questions and should be told what to expect as a result of the vaccination. They should be encouraged to take the vaccine information statements home with them in case they want to refer to them later.

All of the standard recommended childhood vaccines now have corresponding single-page VISs developed by the Centers for Disease Control and Prevention (CDC), including the long-awaited statements on

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Immunization

Survey results

Every year the Massachusetts Immunization Program surveys all licensed group day care centers, kindergartens, seventh grades and colleges to monitor compliance with school and day care immunization requirements. This is the first time we have surveyed for hepatitis B immunization in kindergarten and seventh grade. While hepatitis B immunization is *required* for kindergarten entry, it is only *recommended* for seventh grade. Immunization levels among college students are not as high as those in school and day care children. Several colleges reported difficulty tracking immunizations.

The results of the surveys, summarized in the tables below, indicate that immunization requirements are effective in ensuring that children in licensed day care and school are well-protected against vaccine-preventable diseases. These requirements, and their enforcement, have all but eliminated outbreaks of vaccine-preventable disease in these settings.

Kindergarten and Group Day Care Immunization Survey, 1996–97

	Enrolled	DTP[1]	Polio[2]	MMR[3]	Hib[4]	HepB[5]
Kindergarten	86,896	97%	98%	98%	NA	33%
Day Care	110,221	98%	98%	98%	96%	82%

Seventh Grade MMR Survey, 1996–97

Enrolled	1 dose MMR[3]	2 doses measles	HepB[5]
78,598	99%	96%	30%

College Student Immunization Survey, 1996–97

Enrolled	1 dose MMR[3]	2 doses measles	Td[6]
Undergraduate			
183,664	94%	91%	92%
Graduate			
31,707	90%	83%	89%
Health Science			
24,318	92%	90%	94%
TOTAL			
239,689	93%	90%	92%

When in doubt, vaccinate

More than 500,000 cases of pneumococcal pneumonia, and 40,000 deaths due to invasive pneumococcal disease, occur every year. This is the most common vaccine-preventable cause of death in the US. Over two-thirds of cases had previous encounters with the health care system and were not vaccinated.

The pneumococcal vaccine is safe, effective, and cost-effective. Only 30% of persons 65 years of age and older have been vaccinated, however, and studies have found vaccination rates among nursing home patients to be even lower. Low immunization rates contribute to *Streptococcus pneumoniae* causing outbreaks in long-term care facilities, hospitals, jails, and other institutional settings. The emergence of multidrug-resistant *S. pneumoniae* underscores the importance of pneumococcal vaccine use, particularly among the institutionalized elderly. Some physicians have been reluctant to vaccinate against pneumococcal disease because of difficulty in obtaining immunization records and fear of "over-immunization." **The consequences of failure to vaccinate far outweigh any possible risk associated with revaccination.** The incidence of serious adverse events is as low following revaccination with pneumococcal vaccine as it is following the first dose.

The risk for pneumococcal infection can be reduced by ensuring that everyone 65 years and older receives pneumococcal vaccine. To provide maximum protection of adult patients, every primary care facility and hospital should have a written comprehensive immunization policy that includes the following:

- The immunization status of all adult patients should be assessed at every primary care visit, on admission to long-term care facilities, and on discharge from acute care hospitals.
- If unable to obtain immunization records, patients should be considered *not immunized.*
- All unimmunized patients 65 years and older, and those of any age with medical conditions that put them at risk for complications from disease, should be immunized with pneumococcal vaccine, and with influenza vaccine during flu season. Patients without immunization records, and those for whom it has been more than ten years since their last dose, should receive Td vaccine.
- Standing orders should be in place for pneumococcal, influenza and Td vaccines.

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[1] DTP: Diphtheria, tetanus, pertussis vaccine, ≥4 doses
[2] Polio vaccine: ≥3 doses
[3] MMR: Measles, mumps, rubella vaccine, ≥1 dose
[4] Hib: *Haemophilus influenzae* type b vaccine, ≥ 3 doses
[5] HepB: hepatitis B vaccine, 3 doses
[6] Td: Tetanus, diphtheria toxoid

Southeast Region Update

Tuberculosis Surveillance Area (TSA) V

The geographical boundaries of TB regions were recently changed to match those of other state agencies. Dedham, Dover, Medfield, Millis, Needham, Wellesley and Westwood are now served by TSA V, and the Blackstone Valley communities are now covered by TSA I.

Epidemiology: In 1996, 46 cases of TB were diagnosed in TSA V. The highest case rates were in Brockton and Quincy. There have been several cases over the last year among fishing industry workers in southeastern Massachusetts communities.

Clinical Services: Clinical services are currently provided at Brockton Hospital, Cape Cod Hospital in Hyannis, Morton Hospital in Taunton, St. Anne's Hospital in Fall River, Massachusetts Respiratory Hospital in Braintree, St. Luke's Hospital in New Bedford, and Sturdy Memorial Hospital in Attleboro. Nursing services for the follow-up of people on preventive therapy are provided by the Visiting Nursing Services of Martha's Vineyard & Community Service.

Educational Activities: The annual program entitled "A Regional TB Update 1997" was held in May. It gave attendees information about focusing screening activities on target populations at high risk of TB and minimizing screening of persons at low risk.

Community Outreach Activities: The Community Outreach Workers (ORW) for TSA V are Leonora Gonzalez, Eddy Bien-Aime, and Xue Zhi Sun. Leonora works primarily in the southern part of the region and speaks fluent Portuguese; Xue works part-time in the Quincy area, primarily working with the Chinese population; and Eddy works part-time in the northern part of the region (mainly the Brockton clinic area) and speaks fluent Haitian Creole.

Support services for the region are provided by Anne Bernard (TB office clerk) and Debbie Beausoleil (case register surveyor). The TSA nurse position is vacant; please call Janice Boutotte, Director of Patient Management Services, at (617) 983-6986 if you need assistance.

TB Treatment Unit

continued from page 1

others from involved community agencies, meets every two weeks to review patient progress and discharge plans. The purpose is to ensure comprehensive public health case management.

The staff at Shattuck Hospital have expertise in the management of complex TB cases involving drug resistance, advanced disease and poor response to therapy. Management also includes diagnosis and treatment of HIV infection, substance abuse, and psychiatric illnesses, as needed.

Lemuel Shattuck Hospital, Jamaica Plain

The services offered in the TTU operate within the context of a therapeutic milieu designed to identify and work on patient behavior patterns that contribute to difficulties in completing therapy. It is based on a planned, structured and supportive environment that helps develop problem-solving skills, resolve conflicts, and allow patients to understand the effects of their behavior. Critical to the therapeutic milieu is the patient privilege system that helps build individual responsibility for behavior. Adherence to the treatment plan is rewarded, and patients may progress to outpatient care. Other therapeutic activities include unit jobs, living skills, psychotherapy, and community meetings.

Most admissions to the TTU are voluntary; however, Massachusetts law allows for compulsory admission as a last resort for those who are unwilling or unable to accept appropriate care. For more information, please call the Division of Tuberculosis Prevention and Control at (617) 983-6970.

Empower parents

continued from page 5

Haemophilus influenzae type b (Hib) and hepatitis B vaccines. The polio vaccine VIS was recently revised to explain the latest recommendations on the sequential polio immunization schedule. Most of the VISs have been translated into several languages. Check with your local board of health or regional immunization office to obtain the most current vaccine information statements.

Immunization is safe and the most effective way to prevent serious and potentially life-threatening infections. Educate parents; it's the best way to help them keep their kids healthy.

CD UPDATE
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When in doubt

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- All three vaccines can be safely administered simultaneously, at different anatomical sites.

If you want more information or copies of the guidelines, Vaccine Information Statements or sample standing orders, call the Massachusetts Immunization Program at (617) 983-6800.

Communicable Disease UPDATE
is a free quarterly publication of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health.
David H. Mulligan, Commissioner

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Save the dates

MDPH Teleconference Series on Infectious Disease

July—**Gram Positive Organisms: Susceptibility Testing**

September—**Respiratory Illness Pertussis: Diagnosis & Surveillance**

November—**TB Rapid Diagnostics: Practical or Not?**

Preregistration required, $25 fee, CEUs available. You will need a speaker phone.

For more information, call the National Laboratory Training Network, New England Office at (617) 983-6284 or (800) 536-NLTN (within New England).

TB Regional Update-Northeast

September 18, 8:45 AM–12:30 PM
Salem Hospital Auditorium
For information or to register, please call (508) 851-7261 or (617) 727-7908.

CDC Satellite Training Courses

Immunization Update
September 11, three broadcasts:
8–10:30 A.M., 11–1:30 & 2–4:30 P.M.

Surveillance of Vaccine-Preventable Diseases
December 4, same times as above

For more information call Jean Franzini, RN, at (617) 983-6800

Public Health Training Network Satellite Course

Medical Management of Biological Casualties
September 16, 18 & 19, 12–4:30 P.M.
For more information call Allison Hackbarth at (617) 983-6800.

Annual STD Conference

November 20, 1997
For more information, call the PTC at (627) 983-6945.

CD Update on-line

The MDPH web site now includes previous editions of this newsletter, which you can view by using the Adobe Acrobat Reader (free from http://www.adobe.com/prodindex/acrobat/main.html). The MDPH home-page address is:

http://www.magnet.state.ma.us/dph/

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health

Vol. 5 No. 4 Fall 1997

GOVERNMENT DOCUMENTS
COLLECTION
MAY 19 1998
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Beyond nonoxynol-9

New developments in microbicidal research

An interview with Zeda Rosenberg, PhD, Senior Scientist for Adult Prevention Research, National Institutes of Health.

Q. Is current research being directed at the development of microbicides?

A. The development of alternative methods of reducing the spread of sexually transmitted diseases is an area of major interest. Increased interest in the development of female-controlled methods for the prevention of sexually transmitted disease, coupled with continuing concern regarding the potentially irritating effects of nonoxynol-9, have supported the need for microbicide research.

Q. Can you briefly describe some of the new products being developed as part of current research?

A. One microbicide works similarly to the well-known spermicide nonoxynol-9 by killing STD pathogens before they establish infection. However, new products are being designed to be less irritating to the vagina. Vaginal irritation may counter the benefit of nonoxynol-9 by allowing HIV increased access through irritated vaginal tissues. Several new microbicides build on the natural defense mechanisms of the vagina to provide protection. At least one such product, BufferGel, is currently in NIH phase I clinical trials.

Q. So BufferGel and similar products may be able to prevent STD infection in the vagina and not irritate vaginal tissues?

A. Yes, BufferGel is designed to maintain the natural acidity of the vagina and block the neutralizing effect caused by semen. By maintaining the acidity of the vagina (pH 4), BufferGel is expected to inhibit sperm, HIV, and many other acid-sensitive STD pathogens without disturbing the normal flora of the vagina.

A second category of microbicides are products that interfere with HIV entry into susceptible cells in the vagina. At least one of these products, Pro 2000, is currently in Phase I clinical trials in Antwerp and London.

Q. Does NIH anticipate clinical trials of any of these products in the United States within the next year?

A. Depending upon the outcome of the European studies of Pro 2000, additional trials may begin in the United States next year.

Q. Are there any other developments?

A. A third type of product may be described as a "topical therapeutic" and is intended to inhibit replication of viruses once they have entered cells. These products are designed to stop infection from becoming systemic. At least one of these products may be moving to clinical trials soon.

Q. Can you be more specific about the time frame we can expect on the development and trial phase of any of these topical therapeutics?

A. It is hoped that a Phase I safety study on one such topical therapeutic will begin next year.

* *Dr. Rosenberg will participate in the STD Division's Annual Update in November. See Save The Dates, pg. 8.*

Flu season–adult vaccines

To help protect adults from infectious diseases, the Massachusetts Immunization Program (MIP) distributes influenza, pneumococcal, and tetanus-diphtheria (Td) vaccines for adults. These vaccines are also available for younger individuals who need them because of medical conditions, or because they are household contacts of persons with risk factors.

Persons with certain conditions that place them at higher risk for the complications of influenza should be vaccinated in October or November. The MDPH recommends vaccination for all individuals aged $\geq$65 years; younger individuals ($\geq$6 mo. of age) with heart or lung disease, weakened immune systems, or other chronic medical conditions that place them at increased risk for the complications of influenza; women who will be in their second or third trimester of pregnancy during flu season; and others.

During this flu season, the MIP will distribute 615,000 doses of flu vaccine at no charge to local boards of health. The influenza vaccine distributed this year includes A/Johannesburg-like (H1N1), A/Nanchang-like (H3N2), and B/Harbin-like strains of influenza virus. Although the MIP is urging people to be vaccinated in the fall, flu shots can be given at any time during the influenza season, which extends into March.

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Epidemiology

Pilot hepatitis A vaccination campaign

There has been an increased number of cases of hepatitis A in men who have sex with men (MSMs) in the Boston and Provincetown areas of Massachusetts. A hepatitis A vaccination campaign for this high-risk population will be piloted in these areas. The campaign will include a mailing to healthcare providers on the recommendation for hepatitis A vaccination of MSMs and a media campaign encouraging MSMs with insurance to go to their healthcare provider for vaccination and for uninsured MSMs to go to selected vaccination clinics. The pilot project is a collaboration between the MDPH, the Boston Public Health Commission, the Provincetown Board of Health, the Fenway Community Health Center and Outer Cape Health Services. Please note that hepatitis A vaccine is not available from the Massachusetts Immunization Program except at pilot project sites for uninsured MSMs. For further information on the campaign, contact Tim Broadbent at (617) 983-6802.

Rabies epidemic persists

The raccoon rabies outbreak, first documented in Massachusetts in 1992, has spread to approximately 90% of cities and towns in Massachusetts. Many towns which had their first cases in 1992 through 1994 may have had a lull in cases in the past two years. This is because as raccoon rabies moves through an area, it may kill up to 90% of the raccoon population. It usually takes 3 to 4 years before the raccoon population reestablishes itself to the point where it is once again vulnerable to epidemic spread. Surveillance so far in 1997 suggests that cases of rabies in animals are rising again, and a second-wave effect is occurring in parts of the state. The message for residents is clear: raccoon rabies has not gone away, and people should continue to take precautions to protect themselves and their pets. Health care providers and public health workers should also realize that the persistence of raccoon rabies means that all human exposures to high-risk animals (including bats, raccoons, skunks, woodchucks, foxes and stray cats) should be taken seriously.

For the birds: update on Psittacosis

Birds have always been popular as pets. Unfortunately, many people who buy pet birds are not aware that birds may have diseases that can be transmitted to people. Psittacosis, also called parrot fever, is a bacterial disease common to pet birds and a zoonotic disease that can cause illness in people. It is most commonly identified in psittacine birds such as parrots, parakeets, macaws and cockatiels. Psittacosis in both pet birds and people is reportable in Massachusetts. Any suspect human cases should be reported to the Massachusetts Department of Public Health, Division of Epidemiology and Immunization, (617) 983-6800, and any suspect bird cases should be reported to the Massachusetts Department of Food and Agriculture, Bureau of Animal Health, (617) 727-3018, x 131.

During the month of August, psittacosis was detected in a higher than average number of pet birds, and a suspect human case was identified. Acutely infected birds may be lethargic, anorectic, and have ruffled feathers. They may develop a nasal discharge and diarrhea. As the disease progresses, the bird may die. Some birds will completely recover, and others may become chronic carriers. Carriers who are asymptomatic may sporadically shed the bacteria, potentially infecting other birds or people. Confirmation of the disease is by serology or culture. The disease in birds is treatable with antibiotics.

Human infection occurs through the inhalation of the bacteria that has been aerosolized in urine, feces or respiratory secretions from sick birds. The incubation period in humans is usually 7 to 14 days. Symptoms include sore throat, fever, chills, myalgia, cough, and photophobia. Some patients develop pneumonia. Serologic confirmation is essential to verify the diagnosis. Psittacosis in humans is also treatable with antibiotics.

Reportable diseases updated

continued from page 4

Work-related Diseases & Injuries
Reportable to
Mass. Dept. of Public Health.
For info. on reporting contact
Occupational
Health Surveillance Program;
call: 617-624-5632

◆ **Occupational Lung Disease**
a) Asbestosis
b) Silicosis
c) Beryllium Disease
d) Chemical Pneumonitis
e) Asthma caused by or aggravated by workplace exposures

◆ **Work-related Heavy Metal Absorption**
a) Mercury (blood > 15 ug/l; urine >35 ug/grams creatinine)
b) Cadmium (blood > 5 ug/l; urine >5 ug/grams creatinine)
c) Other

◆ **Work-related Acute Chemical Poisoning**
a) Carbon Monoxide
b) Pesticide
c) Other

◆ **Work-related Carpal Tunnel Syndrome**

◆ **Work-related injury to a person less than 18 years of age**

STD clinic pilot study

A behavioral assessment protocol for use by clinicians was piloted at a Cambridge STD clinic over the past year. The protocol involves use of a two-part assessment tool to personalize counseling sessions. The first part, which clients completed in the waiting room, included a self assessment regarding attitudes and beliefs about condoms, as well as several measures of client confidence in using condoms. The second part of the form allowed the nurse to work with the client to "stage" the client's behavior on a continuum regarding condom use. Using a transtheoretical model of behavior change, the staging of the client combines measures of intention with actual behavior in relation to condom use.

Despite the relatively small sample pilot, some intriguing aspects of client response have emerged. One interesting outcome was divergence between clients' beliefs and actions. A number of individuals indicated belief in condom efficacy and personal confidence in their ability to use condoms, but did not think *they* needed to use condoms. These clients stated that even though they may have contracted an STD, generally their partners were "safe."

Other initial results indicate that women interviewed were more likely than men to report consistent condom use. However, even those clients with histories of consistent condom use indicated that they were not confident about their ability to use condoms if a partner disapproves. This applied to men as well as women and points to the need for further research regarding couple negotiation.

Communicable Disease Updates
January—June 1996 vs. January—June 1997: Reported Cases

DISEASE	1996	1997*	% change from 1996
AIDS	603	469	-22%
Botulism	0	0	—
Campylobacter	619	707	+14%
Chlamydia	3,347	3,646	+9%
Cryptosporidiosis	32	15	-53%
E. coli O157:H7	40	40	—
Giardiasis	374	373	—
Gonorrhea	1,080	1,130	+5%
Hepatitis A	106	149	+41%
Hepatitis B (acute)	46	37	-20%
Lyme Disease	94	98	+4%
Measles	9	8	-11%
Invasive Meningococcal Disease (Neisseria)	31	56	+81%
Pertussis	376	277	-26%
Rabies (animal)	54	114	+111%
Rubella	20	1	-95%
CRS**	0	0	—
Salmonellosis	753	523	-31%
S. typhi (Typhoid)	8	12	+50%
Shigellosis	120	107	-11%
Syphilis (early)	135	104	-23%

* Preliminary data. Reporting not yet complete.

** Congenital Rubella Syndrome

DISEASES REPORTABLE BY HEALTHCARE PROVIDERS - MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH (UPDATED SEPTEMBER 1997)

THE FOLLOWING DISEASES SHOULD BE REPORTED IMMEDIATELY! ! ! ! ! ! !

Contact the local board of health where case resides or the Massachusetts Department of Public Health at 617-983-6800 (weekdays) or 617-522-3700 (24 hours / 7days)

Bacterial Meningitis (including suspect)

Botulism (including suspect)

Diphtheria (including suspect)

Haemophilus influenzae (invasive)

Hepatitis A in a foodhandler

Measles (including suspect)

Meningococcal Infection (invasive)

Poliomyelitis (including suspect)

Rabies (Human only)

Rubella, congenital & non-congenital (including suspect)

Tetanus (including suspect)

Any Cluster / Outbreak of Illness

Enteric Illness in a foodhandler
should be reported ASAP to the local board of health where the case resides & the board of health where the case works

Any cluster of work-related conditions, regardless of whether or not they are on the reportable list, shall be immediately reported by telephone or other electronic means to the Mass. DPH Occupational Health Surveillance Program; call: 617-624-5632

(See page 3 of this newsletter for more info on occupational/environmental health reporting)

Other Diseases Reportable to Local Boards of Health

Report as soon as possible

Amebiasis
Anthrax
Babesiosis
Brucellosis
Campylobactor Enteritis
Chickenpox (varicella)
Cholera
Cryptosporidiosis
E. coli O157:H7
Encephalitis
Foodborne Poisonings
Giardiasis
Hansen's Disease
Hemolytic Uremic Syndrome
Hepatitis Type A (non-foodhandler)
Hepatitis Type B (acute or chronic)
Hepatitis Type C (nonA/nonB)
Kawasaki Disease
Legionellosis
Leptospirosis
Listeriosis
Lyme Disease
Malaria
Meningitis (viral)
Mumps
Pertussis (Whooping Cough)
Psittacosis
Rabies (animal)
Reye Syndrome
Rheumatic Fever
Rocky Mountain Spotted Fever
Salmonellosis (including typhoid)
Shigellosis
Toxic Shock Syndrome
Toxoplasmosis
Trichinosis
Tularemia
Yellow Fever
Yersiniosis

Cases of Emerging and Potentially Emerging Infections; call: (617)-983-6800

Cyclospora
Dengue
Ehrlichiosis
Group A Streptococcus (invasive)
Hantavirus
Hepatitis E
Hepatitis G
Plague
Viral Hemorrhagic Fevers

Diseases Directly Reportable to Mass. Dept. of Public Health

For further info. use phone #s

- ◆ **AIDS: (617) 983-6560**
- ◆ **Sexually Transmitted Diseases: (617) 983-6952**

Chancroid
Chlamydial Infections (genital)
Genital Warts
Granuloma Inguinale
Herpes, Neonatal (*onset within 30 days after birth*)
Lymphogranuloma Venereum
Opthalmia Neonatorum
  a) Gonococcal
  b) Other Agents
Pelvic Inflammatory Disease
  a) Gonococcal
  b) Other agents
Syphilis

- ◆ **Tuberculosis: 1-888-MASSMTB** (24 hours/7days)

- ◆ **Rabies Post-exposure Prophylaxis : 617-983-6800**

IMMUNIZATION GUIDELINES

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

August 1997

As required by state regulations (102 CMR 7.07 and 105 CMR 220.00), the Department of Public Health has established the following requirements for children to attend day care, kindergarten, school and college. These requirements are the minimally acceptable number of immunizations for attendance at day care centers and schools. The optimal immunization recommendations of the Massachusetts Department of Public Health are outlined in the second table.

Minimum Immunization Requirements

	Daycare/Preschool[1]	Kindergarten	Grades 1–6	Grades 7–12	College
Hepatitis B[2]	3 doses	3 doses			
DTaP/DTP/ DT/Td[3]	≥4 doses DTaP/ DTP	5 doses DTaP/ DTP	≥4 doses DTaP/ DTP **or** ≥3 doses Td	≥4 doses DTaP/DTP or ≥3 doses Td **plus** 1 Td booster (grades 10–12)	1 Td booster within last 10 years
Polio[4]	≥3 doses	4 doses	≥3 doses	≥3 doses	
Hib[5]	3 or 4 doses				
MMR[6]	1 dose	2 doses measles, 1 mumps, 1 rubella	2 doses measles (grades K–2), 1 mumps, 1 rubella	2 doses measles, 1 mumps, 1 rubella	2 doses measles, 1 mumps, 1 rubella
Varicella[1,7]	1 dose starting 8/98				

Recommended Immunization Schedule

	Birth	1 mo	2 mos	4 mos	6 mos	12–15 mos	15–18 mos	4–6 yrs	11–12 yrs[8]
Hep. B[2]	1st dose	2nd dose			3rd dose				3 doses
DTaP/DTP[3]			1st dose	2nd dose	3rd dose		4th dose	5th dose	**Td** booster
Polio[4]			1st dose	2nd dose		3rd dose		4th dose	
Hib[5]			1st dose	2nd dose	3rd dose	4th dose			
MMR[6]						1st dose		2nd dose	2nd dose
Varicella						1 dose[7]			1 dose

Vaccine Administration Notes

[1] **Day care/Preschool:** Minimum requirements by 24 months; younger children should be immunized according to schedule for their age. The varicella requirement applies only to children attending day care who are 19 months of age or older without a history of chickenpox, who were born on or after January 1, 1997. Varicella vaccine is also strongly recommended for susceptible preschool children.

[2] **Hepatitis B:** Required for day care, preschool and kindergarten attendance for children born on or after 1/1/92. Infant schedule depends on the hepatitis B status of the mother.

[3] **DTaP/DTP/DT/Td:** Fourth dose of DTaP/DTP can be given at 12–15 months **if** it is ≥6 months since the third dose. Five doses of DTaP/DTP are required for school entry unless the fourth dose is given after the fourth birthday. Half doses are not acceptable. DT is only acceptable when accompanied by a letter stating there is a medical contraindication to DTaP/DTP. First Td can be given as early as ages 11–12 years (if at least 5 years have passed since the last dose of DTaP/DTP) and every 10 years thereafter.

[4] **Polio:** Four doses are *always* required for the sequential schedule and any other schedule using both IPV and OPV. Four doses are usually required for all-IPV and all-OPV schedules. However, only three doses are needed when the third dose is given after the fourth birthday. The following schedules are all acceptable: **Sequential**—IPV at ages 2 and 4 months and OPV at ages 12–18 months and 4–6 years; **All IPV**—at ages 2, 4, 12–18 months and 4–6 years; **All OPV**—at 2, 4, 6–18 months and 4–6 years. ACIP routinely recommends the sequential schedule.

[5] **Hib:** Number of doses required depends on age child starts immunization. Follow manufacturer's instructions for doses 3 and 4.

[6] **MMR:** First dose is recommended at 12–15 months. A second dose of measles vaccine, given at least 1 month after the first, is required for entry to all grades K–2, 7–12, and college. Only one measles dose is required for entry to grades 3–6. MMR combination vaccine is recommended.

[7] **Varicella:** Effective August 1, 1998, one dose will be required for day care attendance for children 19 months of age or older without a history of chickenpox, who were born on or after January 1, 1997. Varicella vaccine is also strongly recommended for susceptible preschool children.

[8] **11–12 Years:** At 11 to 12 years of age, assess immunization status and give varicella vaccine to those susceptible; vaccinate those not previously vaccinated with MMR 2 and hepatitis B; and give Td if it is at least 5 years since the last dose of DTaP/DTP/DT.

See other side for catch-up schedules for children who start late or missed vaccines

Catch-Up Schedule for Children Not Yet 7 Years Old

who start late or are >1 month behind schedule

Vaccines Administered

	First visit	Second visit	Third visit	Fourth visit	Preschool
Age at start of vaccination		1 mo. after first visit	1 mo. after second visit	≥6 months after third visit	4–6 years old
4–6 months	DTaP/DTP	DTaP/DTP	DTaP/DTP	DTaP/DTP	DTaP/DTP[1]
	Polio[2]	Polio[2]	Polio[2]		Polio[1, 2]
	Hib[3]	Hib[3]	Hib[3]	Hib[3] booster at age ≥ 12 mos.	
	Hep B[4]	Hep B[4]		Hep B[4]	
				MMR at age 12–15 mos.	MMR
				Varicella at age 12–18 mos.	
7–11 months	DTaP/DTP	DTaP/DTP	DTaP/DTP	DTaP/DTP	DTaP/DTP[1]
	Polio[2]	Polio[2]	Polio[2]		Polio[1, 2]
	Hib[3]		Hib[3]	Hib[3] booster at age ≥ 12 mos.	
	Hep B[4]	Hep B[4]		Hep B[4]	
		MMR at age 12–15 mos.			MMR
		Varicella at age 12–18 mos.			
12–14 months	DTaP/DTP	DTaP/DTP	DTaP/DTP	DTaP/DTP	DTaP/DTP[1]
	Polio[2]	Polio[2]	Polio[2]		Polio[1, 2]
	Hib[3]		Hib[3]		
	Hep B[4]	Hep B[4]		Hep B[4]	
	MMR at age 12–15 mos.				MMR
	Varicella at age 12–18 mos.				
15–59 months	DTaP/DTP	DTaP/DTP	DTaP/DTP	DTaP/DTP	DTaP/DTP[1]
	Polio[2]	Polio[2]	Polio[2]		Polio[1, 2]
	Hib[3]				
	Hep B[4]	Hep B[4]		Hep B[4]	
	MMR				MMR
	Varicella at age 12–18 mos.				
5–6 years	DTaP/DTP	DTaP/DTP	DTaP/DTP	DTaP/DTP[1]	
	Polio[2]	Polio[2]	Polio[1, 2]		
	Hib vaccine is not routinely recommended for children 5 years (60 months) or older				
	Hep B[4]	Hep B[4]		Hep B[4]	
	MMR	MMR			

Catch-Up Schedule for Individuals 7 Years Old or Older

who were not vaccinated at the recommended time

Vaccine	First Visit	4–8 wks after first visit	6 months after second visit	Every 10 years
Td	1st dose	2nd dose	3rd dose	Booster doses
Polio[2, 5]	1st dose	2nd dose	3rd dose	
MMR	1st dose	2nd dose (or at entry into 7th grade)		
Hepatitis B	1st dose	2nd dose	3rd dose	
Varicella	1 dose at age 11–12 years (if susceptible)			

Vaccine Administration Notes

[1] Fifth dose of DTaP/DTP and fourth dose of polio are not needed if most recent doses were given after the fourth birthday. However, a fourth polio dose is always needed when any combination of IPV and OPV is used.

[2] A sequential IPV/OPV schedule, an all OPV schedule, or an all IPV schedule is acceptable. For those given IPV only, an interval of 6 months between the second and third doses is recommended.

[3] Hib schedule varies by manufacturer and age child starts vaccination. Give booster at least 2 months after previous dose.

[4] Hepatitis B vaccine is recommended for children born on or after January 1, 1992; sixth graders; and certain high-risk groups.

[5] Polio is not recommended for those 18 years and older unless there is a potential for exposure.

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Confidentially Speaking

STD case reporting

Reports of sexually transmitted diseases are made directly to the Division of STD Prevention. This is different from the reporting protocol for most diseases, which go through the local boards of health. It is done this way as an additional measure to protect confidentiality. Reporting cards for clinicians to use are available from the Division by calling (617) 983-6940.

Report cards not only provide demographics about the person and what follow-up in terms of treatment and partners has occurred, but they also provide the clinician with information about treatment guidelines. The cards provide opportunities for the clinician to request information or other services from the Division. Laboratories report their significant findings either by sending results to a dedicated electronic mailbox, a fax machine (617-983-6962) located in a locked and restricted area, on a computer disk, or through the mail. Significant laboratory reports trigger a call to the clinician to confirm that the finding is indicative of a case.

The work of the Division is rooted in trust; it is essential that personal and sensitive information is kept confidential. Without this, we could not do our job of STD prevention. The case records and laboratory information are protected by technical and legal measures. Access to the STD databases is controlled through passwords which are changed frequently. The surveillance computers and paper forms are located in a locked office; entry requires a code. There are only two ways for data with personal identifiers to legally leave the database. The first is if the person requests, in a notarized letter, a copy of their own file. The second is via a judicial order. The records can only be demanded by a judge, who then reviews it to see if the information is relevant to the legal case being heard. A Division manager hand-carries the file to the judge and stays until the file's relevance is determined. The manager will then return to the Division with the file, ensuring that no one else sees it. The data can not be subpoenaed by a lawyer.

Surveillance and epidemiologic data are used extensively for program planning and evaluation purposes. The data direct us to where services are most needed, what sorts of services are appropriate, and for whom. The case data are also used for professional purposes and by community-based service agencies. In such circumstances, the data are available only in aggregate form in routine or customized reports, that will not allow for identifying any individuals.

You be the epi

A young man who is an upwardly mobile businessman and describes himself as heterosexual has been contacted by the STD Division epidemiologist about a recent exposure to gonorrhea. Although he has health insurance, he agrees to be seen in an STD clinic to ensure confidentiality. He denies discharge, pain or other symptoms. When the provider performs a routine STD exam on him, no lesions are found on the genitalia, and no discharge or tenderness are noted. The gram stain from the urethra was negative for gram negative intracellular diplococci (the bacteria that cause gonorrhea). The patient says he did not have unprotected anal sex, but after being asked by the provider, he agrees to have a rectal culture done.

The tests done at the clinic are negative, but additional time is required for results from more definitive culture tests. The patient is asked to call back in two days for the results of the culture. The provider also recommends that the patient receive preventative treatment because the Disease Intervention Specialist (DIS) has indicated the original patient had urethral gonorrhea.

When the patient calls back for his culture results, he is told they are negative. Now he is angry and claims that the DIS and the STD clinic staff do not know what they are doing! What issues of STD investigation and services does this illustrate?

Analysis

The providers failed to perform a thorough sexual assessment to identify all the possible sites of exposure; the patient could have had oral sex and be infected in the pharynx. Therefore, an incomplete sexual history and clinical examination meant that a throat culture was never performed. The providers and staff also made an incorrect assumption—a patient's stated sexual orientation may not always be an accurate indicator of the full range of his/her sexual behavior.

Reportable diseases updated

The Massachusetts List of Reportable Diseases has been updated and is now available in a new format (see pages 3 and 4). This chart replaces the 1994 List of Reportable Diseases. For additional copies or questions, call the Division of Epidemiology and Immunization at (617) 983-6800. This chart is also available on the Massachusetts Department of Public Health's website: http://magnet.state.ma.us/dph/ under the "Provider Information" section.

Immunization

Spotting new measles activity

An outbreak of measles occurred in Massachusetts during May 1997. Seven cases were among students at a public elementary school in Andover. The eighth case was in a 9-month-old unvaccinated infant who was exposed to the virus in a physician's office. One of the students had previously received two doses of MMR, but the other six had received only one dose of MMR.

Several of the infected students traveled to neighboring states and participated in town-wide sports events during their infectious periods, which necessitated extensive control efforts. Health departments in Maine, Rhode Island, and New Hampshire were notified. In consultation with the Centers for Disease Control and Prevention (CDC), a decision was made that all susceptible students, staff, and contacts in the Andover public and private school system needed to receive a dose of MMR vaccine. In addition, day care and preschool centers in Andover, North Andover, and Tewksbury were notified that immunization was also recommended for their students and staff. In a collaborative effort with the Andover Board of Health, the public and private schools of Andover, the local VNA, and MIP staff, some 1,900 individuals were immunized in clinics held in Andover between May 27 and June 5, 1997.

International importation of measles continues to be a source of concern. During July 1997, there were three laboratory confirmed cases of measles in Massachusetts that appear to have sources in Ukraine, Greece, and France/Belgium respectively. In the first two situations, the cases were foreign-born students with no documentation of measles vaccination. The third imported case was in an unvaccinated U.S. adolescent with a religious exemption to immunization. There was secondary spread from these three cases to three other individuals.

There has been a 99% decrease in the annual reported incidence of measles in the United States since 1963, when measles vaccine was licensed. However, outbreaks, particularly among school-aged children, who have only received one dose of measles vaccine, and international importation of measles into the United States continue to occur. By requiring two doses of measles vaccine at school entry, Massachusetts is "on target" to achieve full two dose coverage of all students, kindergarten through college, by 2001. Through this policy and enhanced surveillance, we expect to continue reducing measles incidence in Massachusetts.

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj

New Varicella Immunization Requirement for Day Care Attendance

Effective August 1, 1998, one dose of varicella vaccine, or physician-certified reliable history of chickenpox, will be ***required*** for all children who are:

1) 19 months of age or older, and enrolled in a licensed group or family day care center; and
2) who were born on or after January 1, 1997.

Please note: The new *Certificate of Immunization* includes a section for past history of disease.

Reliable history is defined as:

1) physician interpretation of parent/guardian description of chickenpox;
2) physician diagnosis of chickenpox; or
3) serologic proof of immunity.

Day care and school personnel will ***not*** be making these determinations.

DNA testing to evaluate TB

Tuberculosis contact investigations have been conducted using the concentric circle theory approach for identifying persons exposed to an active case of infectious disease. However, despite efforts to identify appropriate contacts, potential contacts continue to go unidentified.

Recently, DNA molecular typing methods have assisted in evaluating TB contact investigations. In Massachusetts, the Division of TB Prevention and Control has begun a study in which an isolate from each laboratory confirmed case is sent to the Northeast Regional RFLP Laboratory in New York for DNA typing using restriction fragment length polymorphism (RFLP)-based technology.

Since DNA fingerprinting analysis can be useful as additional evidence in cases of suspected transmission, for the past two years Massachusetts has been sending isolates from cases with an identified source case for DNA testing to confirm epidemiologic links. In addition, isolates have been sent from cases with similar environmental exposures, such as homeless shelter, correctional institution or worksite.

Results. Of 36 persons with reported exposure and for whom RFLP results were available, 19 (53%) demonstrated exact DNA matches, 3 (8%) displayed probable matches (DNA fingerprint patterns similar, but not an exact match), and 14 (39%) did not match. Of 28 isolates sent for confirmation of possible environmental exposure, 12 (43%) did not match, while 16 (57%) revealed matches. Three matches were unexpected: one arose from a homeless-related exposure (a health care worker in a shelter); two from the same prison at different times; and one from a prison and a shelter.

Conclusions. Although slightly more than half of the epidemiologic links were verified by matching DNA fingerprints, 39% of the cases identified through traditional contact investigation methods did not have molecular evidence of relatedness to the suspected source case. In fact, suspected linked cases among foreign born persons were 2.33 times more likely not to have been infected by the reported source case, even in cases living in the same household. However, DNA fingerprinting did support a link in 59% of persons with potential environmental exposures, suggesting that ongoing transmission is occurring in some areas.

This data raises questions about current definitions of contact exposure and methods of obtaining contact information. It is also possible that current molecular epidemiology may be misleading in some cases. As molecular epidemiology contributes new data, contact investigation may change. In particular, for persons from shared environments, other methods may be needed to identify contacts.

Isoniazid Toxicity Policy

Based on recommendations from the American Thoracic Society and the CDC, the Massachusetts Division of Tuberculosis Prevention and Control recommends the following for monitoring patients receiving isoniazid (INH) as part of a treatment regimen for active disease or as preventive therapy:

1. At any age:
a) The patient should be educated to the symptoms of toxicity and told to stop all medications immediately if symptoms are present, and notify the treating clinician. Abdominal discomfort, nausea, anorexia, and malaise are the most common early symptoms of INH hepatitis. Jaundice and dark urine occur later in hepatitis.
b) Monthly monitoring (face-to-face visit) by a licensed health care provider is essential to assess for toxicity and support adherence.

2. Under age 35:
a) Baseline ALT (SGPT) only*, to detect underlying hepatic disease. Although INH toxicity is uncommon under age 35, viral hepatitis may be prevalent - especially in patients from endemic countries, or with a history of injecting drug use. Without a normal baseline value, it is difficult to evaluate a subsequent abnormal ALT (SGPT) or AST (SGOT). Children 15 years old and younger without a history or symptoms of liver disease *need not have a baseline SGPT* because INH toxicity is uncommon in this age group, and unnecessary blood tests are a disincentive to follow-up.
b) No routine ALT (SGPT) is needed after the baseline unless the patient exhibits symptoms consistent with hepatitis or is at high risk for toxicity because of underlying liver disease or high risk behavior.
c) Additional liver function tests, AST (SGOT), bilirubin, alkaline phosphatase, LDH, hepatitis serologies, etc., should be obtained if the patient is symptomatic or has an abnormal ALT (SGPT).

3. Age 35 and over, and black and Hispanic women >12 years of age:**
a) Baseline and monthly ALT (SGPT). Elevations of ALT (SGPT) of up to 5 times normal without symptoms is common and does not require stopping INH. Close clinical and laboratory follow-up is recommended while liver function tests are abnormal.
b) Full battery of liver function tests, AST (SGOT), bilirubin, alkaline phosphatase, LDH, hepatitis serologies, etc., should be obtained if the patient is symptomatic or has an abnormal ALT (SGPT).

*ALT (SGPT) is more specific for liver injury than AST (SGOT) which can be elevated due to other causes. Although either test can be used as an inexpensive screening test for INH hepatitis, ALT (SGPT) is preferred due to its greater specificity.
**Higher than expected rates of INH hepatitis have been observed among postpubescent black and Hispanic women.

CD UPDATE
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TB Announcement

The Division of Tuberculosis Prevention and Control is currently modifying the present PPD distribution system, effective November 1997. The new system will be similar to vaccine distribution. It will ensure local boards of health an uninterrupted supply of PPD *regardless of temperature conditions* and will allow convenient opportunities to pick up the product.

Communicable Disease UPDATE
is a free quarterly publication of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health.
Howard K. Koh, MD, MPH, Commissioner

To subscribe, please call Debra Thimas at (617) 983-6800

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Save the dates

CDC Satellite Training Courses

Hepatitis C: Diagnosis, Clinical Management, Prevention
November 22, 8–11:00 AM. To be held at the State Lab Institute in Jamaica Plain. To register for credits ($25), call the Hepatitis Foundation International at (800) 891-0707. Deadline is November 1. For logistic information call Walt Lasota at (617) 983-6834.

Surveillance of Vaccine-Preventable Diseases
December 4, 12:00–3:30 PM. To be held at the State Lab Institute in Jamaica Plain. For more information call Jean Franzini at (617) 983-6850.

Upcoming Courses for 1998:

Vaccine Safety
February 26, 1998

The Epidemiology and Prevention of Vaccine-Preventable Diseases
April 9, 16, 23, 30, 1998 (4-day course)

Adult Vaccine Preventable Diseases
June 4, 1998

These programs will be carried live by the Health and Sciences Television Network (HSTN) and by the Long Term Care Network (LTCN). For more information to downlink your site or attend a program, please call Jean Franzini at (617) 983-6850.

TB Tomorrow

Ted Badger Conference
Planned for March 24, 1998

STD Annual Update

November 20, at the Colonial Hilton in Wakefield. For more information, call Wendy Hylton at 983-6945.

1997 Immunization Guidelines

The immunization schedule has been updated, as recommended by the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Pediatrics (AAP), and is included (as an insert) in this issue of *CD Update. For* further information about the schedule, contact the Massachusetts Immunization Program at (617) 983-6800, or your Regional Immunization Office (numbers below).

Boston (617) 534-5609
Central (508) 792-7880
Metro: Jamaica Plain (617) 983-6860
Canton (781) 828-7700
Northeast (978) 851-7261
Southeast (508) 947-1231
Western (413) 545-6600

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Communicable Disease UPDATE

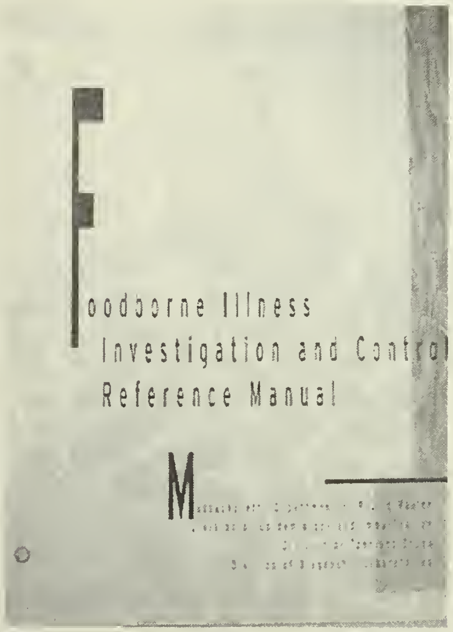
Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 6, No.1 Winter 1998

Foodborne illness initiatives

s here! The *Foodborne Illness Investigation* *id Control Reference Manual*

ıe Massachusetts Department of Public Health ıDPH) is pleased to announce the all new *Foodborne ıess Investigation and Control Reference Manual*, ailable for local boards of health in Massachusetts.

reased emphasis is being placed on foodborne ess investigation and control in Massachusetts.



is emphasis is based on input from the MDPH's orking Group on Foodborne Illness Control, local alth departments, CDC's 1994 publication, *'dressing Emerging Infectious Disease Threats: A evention Strategy for the United States*, and the cent national initiative to enhance the safety of the ood supply. These sources point out the need for up-to-date information and increased technical assistance to local health departments for prevention and control of foodborne illness.

The reference manual is a comprehensive guide that offers instruction on foodborne illness surveillance, epidemiologic and environmental investigation, and control. It contains basic information, guidelines, recommendations, and regulatory requirements. The manual will be distributed free to all local health departments. Trainings will follow that will cover material in the manual. Two copies for each local health department are available at the MDPH's regional immunization offices. Please call ahead to make arrangements for pick-up. For other health professionals who are interested, the reference manual will be available soon on the MDPH's web page. The web page address is: [http://www.magnet.state.ma.us/dph/]. Look under the "Provider Information" section. You will need adobe acrobat reader to download information. Questions can be addressed to Allison Hackbarth, MPH, Managing Editor, at (617) 983-6800. **(See pages 2 and 5 for related articles on foodborne illness.)**

GOVERNMENT DOCUMENTS
COLLECTION
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Expanded state-supplied vaccine availability

In accordance with the most recent recommendations of the Advisory Committee on Immunization Practices (ACIP), the Massachusetts Immunization Program (MIP) is immediately expanding the availability of state-supplied hepatitis B, varicella, MMR, and hepatitis A vaccines. Hepatitis B vaccine is now available to all children through 18 years of age with targeted catch-up of adolescents in the 6th through 12th grades and all children in any of the high-risk groups. Varicella vaccine is now available for susceptible children through 18 years of age and susceptible household contacts of immunocompromised individuals regardless of age. MMR is now available for the first or second dose for all children through 18 years of age. Hepatitis A vaccine is now being provided by the MIP. This vaccine is available for high-risk children through 18 years of age, with prior approval from the MIP.

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Epidemiology

Foodborne illness initiatives

A new surveillance system

The Massachusetts Working Group on Foodborne Illness Control (WGFIC) routinely uses a foodborne illness complaint worksheet to record episodes of possible foodborne illness. In 1997, the WGFIC implemented the use of a computer database system for tracking complaints, in which key information can be entered, updated, reviewed, and analyzed. Linked data files allow results from environmental, epidemiologic, and laboratory investigations stemming from specific complaints to be entered and rapidly accessed.

The database can be used to identify specific complaints based on time, town, suspect establishment(s), or other variables. Programs can be run to determine possible links among complaints received (e.g. a common town or establishment), or, for example, to analyze food handling violations found by setting or by food type.

The WGFIC encourages all local boards of health to complete the complaint worksheet and to fax or mail it to the Division of Food and Drugs. A copy of the worksheet can be found in Chapter 4 in the *Foodborne Illness Investigation and Control Reference Manual.* (See related foodborne illness articles on pages 1 and 5.) Outbreaks of foodborne illness often go undetected or are identified too late to prevent further illness. A single foodborne illness complaint received by one town, forwarded to the WGFIC, and logged into the database, may be the only link to another such complaint received from a neighboring town, thus helping to identify a foodborne outbreak.

Fax or mail (in an envelope marked "Confidential") completed worksheets to:

Food Protection Program
Division of Food and Drugs
MA Department of Public Health
305 South Street
Jamaica Plain, MA 02130
Fax number: (617) 983-6770

Oral rabies vaccine barrier expanded

All parts of Massachusetts currently have raccoon rabies except for Cape Cod and the islands of Martha's Vineyard and Nantucket. The Massachusetts oral rabies vaccine program is in its fourth year. Every six months, the Tufts School of Veterinary Medicine and the Massachusetts Department of Public Health distribute fishmeal bait containing rabies vaccine onto the ground on both sides of the Cape Cod Canal. The raccoons eat the bait and become immunized against rabies, providing a barrier of immune raccoons. Until now, the main goal of the program has been to keep Cape Cod free of raccoon rabies, but due to the documented success of the program, the vaccine zone is now being expanded northward into the towns of Plymouth and Wareham. The new goal of the oral rabies vaccine program is to continue expanding the vaccine zone north and west into the state so that larger portions of the state may become protected, minimizing the risk of human and domestic animal exposure to rabies.

Chronic fatigue syndrome

Chronic Fatigue Syndrome (CFS) is a serious and often disabling condition. Also known as Chronic Fatigue Immune Dysfunction Syndrome (CFIDS), CFS is a complex, multisystem illness characterized by prolonged (six months or longer), debilitating fatigue associated with symptoms such as recurrent sore throat, muscle and joint pain, headache, and neurological complaints.

CFS is not a new disease. It has occurred in many parts of the world, over many years, with names such as epidemic neuromyasthenia, myalgic encephalomyelitis, and others. Fibromylagia syndrome is a closely related disorder. Outbreaks have been reported. The syndrome often begins following what seems to be an acute viral illness. It may last for many years. Unfortunately, no specific biologic markers or diagnostic tests have been defined as yet, but many patients have unregulated immune systems on certain tests, abnormal brain scans, and neuroendocrine and autonomic nervous system abnormalities.

While prolonged and severe fatigue can be caused by a number of conditions, such as hypothyroidism, malignancy, sleep apnea, medication, obesity, etc., CFS is a distinct, scientifically recognized disease syndrome. The federal Centers for Disease Control and Prevention (CDC) revised the CFS case definition in 1993. The current definition includes: clinically evaluated, unexplained persistent or relapsing fatigue that is of new or definite onset, is not the result of ongoing exertion, is not substantially alleviated by rest, and results in substantial reduction in previous levels of occupational, educational, social, or personal activities. The case definition also requires four or more concurrent symptoms, persistent or recurrent over six months, among which are impaired memory/concentration, sore throat, tender lymph nodes, multijoint pain without apparent inflammation, new type/pattern/severity of headache, unrefreshing sleep and postexertional malaise. Other medical or psychological conditions that may cause prolonged fatigue need to be ruled out.

continued on page 4

STDs and cancer

It has long been noted that some cancers have epidemiologic characteristics similar to those of sexually transmitted diseases. Recent work has demonstrated associations between infections with human papilloma virus (HPV, or genital warts), with cervical and anal carcinoma, and hepatitis B virus with liver cancer. These findings were prominently highlighted in the Institute of Medicine's report on STDs in America, "The Hidden Epidemic." One of the emerging issues for STD prevention is how it can be a tool for preventing cancer.

Dr. H. Hunter Handsfield, a well-known and respected STD researcher and clinician, will spend a sabbatical year at CDC to help develop national programs aimed at viral STD prevention. Many issues need to be confronted. There are no cures available for viral infections. Laboratory resources need to be expanded, as viral isolation and typing facilities are not typically provided through STD prevention programs. Viral STDs increase the importance of either incorporating more reproductive care services into STD care, or tightening connections between STD and reproductive care services. Surveillance must be able to distinguish between primary versus recurrent infections. Viral STD-specific prevention educational messages are needed. What do we need to be aware of when educating about chronic infections? These are some of the challenges STD programs will need to meet as we move into this new realm of prevention.

HIV episode triggers awareness

In the fall of 1997 a drug dealer traveled between Jamestown, New York and New York City, dispensing drugs and transmitting HIV along the way. He accepted sex as well as money for drugs. Many of his contacts were teenagers, and much of the sex was anonymous. The situation was recognized after one contact came to the Jamestown STD clinic, was diagnosed with chlamydia, and subsequently tested positive for HIV. Six others eventually came to the clinic, and either named the dealer or gave a close physical description. At least 28 primary partners and 53 associated contacts have been named. These contacts have named at least 70 additional partners. Of these contacts, good descriptions, names and/or locating information is available for less than 30.

This episode has focused attention on the value of public health Partner Notification (PN) as an STD/HIV disease prevention tool. PN serves those at highest risk of exposure (partners of infected people) by informing them of their exposure, educating them regarding behaviors that elevate their risk for infection and how they may reduce such risk, and providing opportunities to be evaluated/tested. PN services are also designed to protect the source of information from disclosure. For more information about PN and how it is conducted, call the Division of STD Prevention at (617) 983-6940.

Videotape available

A videotape of a recent conference on caring for adolescents with STDs can be obtained by calling the Division of STD Prevention at (617) 983-6940.

STD clinic list

The recent RFR for public health contracts has been completed. The following is a preliminary list of Massachusetts STD clinics listed by region.

Northeast

HealthQuarters (Lynn) (781) 595-5463
Lowell Community Health Center (978) 937-6100
Holy Family Hospital (Methuen) (978) 687-0151

Boston

Boston Medical Center (617) 534-4081
Massachusetts General Hospital (617) 726-2748
Chelsea Health Center (617) 887-4608

Southeast

Brockton Hospital (508) 941-7000, x2205
Stanley Street Treatment and Resources (Fall River) (508) 679-5222

Central

Planned Parenthood (Worcester) (508) 854-3300

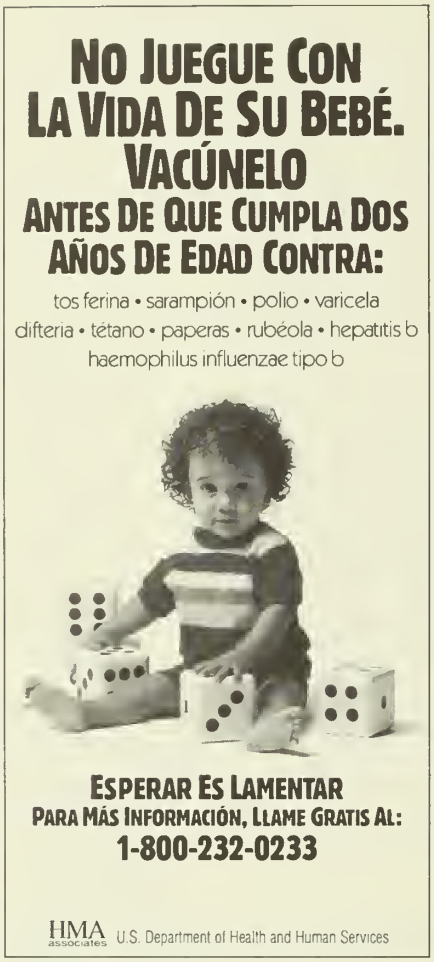
Western

Brightwood Health Center (Springfield) (413) 784-8354
Family Planning Council (Springfield) (413) 733-6639
Berkshire Medical Center (Pittsfield) (413) 447-2654

Two clinics are subcontracted satellite sites (Chelsea from Massachusetts General Hospital and Family Planning from Brightwood). Information about clinic hours will be released as soon as that is finalized.

Immunization

Don't gamble with the life of your baby!



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ANTES DE QUE CUMPLA DOS AÑOS DE EDAD CONTRA:

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difteria • tétano • paperas • rubéola • hepatitis b
haemophilus influenzae tipo b

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1-800-232-0233

HMA associates U.S. Department of Health and Human Services

In October of 1997, the Massachusetts Immunization Program launched a state-wide six-week immunization campaign directed toward Spanish-speaking residents of Massachusetts. Using the themes "No Juegue Con La Vida De Su Bebé (Don't Gamble with the Life of your Baby), and "Vacúnese: Algunas Enfermedades Nunca Se Quedan Atrás" (Immunize: Some Things You Never Outgrow), the campaign used newspapers, billboards, radio, and television spots to emphasize the need to have both children and adults up-to-date with immunizations.

Designed by HMA Associates of Washington, DC, and the National Coalition for Adult Immunization of Bethesda, MD, the campaign focused on increasing the immunization rates of children under the age of two and adults within the Hispanic community. Each ad featured the National Immunization Information's toll-free number for more information and questions. "Although our rates for immunization are very high in Massachusetts," says Victoria Soler, Coordinator of the Massachusetts Immunization Program, "it has been very hard to reach everyone within the Spanish-speaking community. We are excited to be able to use these very effective national campaigns in Massachusetts."

Don't wait—vaccinate

It's not too early to begin planning your activities for National Infant Immunization Week (NIIW) scheduled for April 19 to 25, 1998. Contact your local Regional Immunization Office to obtain a kit or other materials.

Chronic fatigue syndrome

continued from page 2

The 1998 National Research and Clinical Conference of the American Association for Chronic Fatigue Syndrome (AACFS) will be held in Massachusetts, at the Hyatt Regency in Cambridge, October 10-12, 1998. For more information, contact AACFS at the address below.

Sources of information

- The National Institutes of Health publishes *Chronic Fatigue Syndrome – Information for Physicians.* [For an information packet, contact: Office of Communications, NIAID (31/7A50), 31 Center Dr., MSC 2520, Bethesda, MD 20892-2520]
- The Massachusetts Chronic Fatigue Immune Dysfunction Syndrome Association has published *Chronic Fatigue Syndrome: A Primer for Physicians and Allied Health Professionals* and provides information, education, advocacy, and support to patients and providers, including a quarterly newsletter. [Mass CFIDS Association, 808 Main Street, Waltham, MA 02154; (781) 893-4415; http:\\www.masscfids.org]
- The CDC provides *The Facts About Chronic Fatigue Syndrome* and information about CFS over a 24-hour voice information system at (404) 332-4555. [Centers for Disease Control and Prevention, National Center for Infectious Diseases, Atlanta, GA 30333]
- The CFIDS Association of America, Inc. supplies informational brochures, professional education materials, patient support and advocacy, and *The CFIDS Chronicle.* [The CFIDS Association of America, Inc., P.O. Box 220398, Charlotte, NC 28222-0398; (800) 44-CFIDS (800-442-3437); http:\\www.cfids.org]
- The American Association for Chronic Fatigue Syndrome is a professional organization for clinicians. [AACFS, c/o Harborview Medical Center, 325 Ninth Ave., Box 359780, Seattle, WA 98104; (206) 521-1932; http:\\weber.u.washington.edu\~dedra\aacfs1.html]
- *Journal of Chronic Fatigue Syndrome,* [Haworth Medical Press, 10 Alice St., Binghamton, NY 13904-1580; (800) 342-9678; http:\\www.getinfo@haworth.com]

You be the epi

It's Friday afternoon, and a local hospital infection control practitioner calls your board of health to report three cases of gastrointestinal illness among patrons of a restaurant in your jurisdiction. By the end of the day, two more hospitals have telephoned your office with two additional cases involving the same food establishment. What should you do?

Analysis

Five cases of illness linked to one establishment should send up the "red flag" signal that you could have a foodborne outbreak on your hands. The following are sequential steps in the investigation of foodborne complaints and outbreaks.

1) Be prepared. You should already have designated individual(s) trained in foodborne disease prevention and control to evaluate and investigate foodborne illness complaints and outbreaks.
2) Record information on a *Foodborne Illness Complaint Worksheet.* (See related article on page 2.)
3) Report the cluster to the Massachusetts Division of Food and Drugs at (617) 983-6712 or the Massachusetts Division of Epidemiology and Immunization at (617) 983-6800.
4) Take steps to reach a diagnosis.
   - Collect leftover food samples when appropriate from the food establishment and/or complainant in a timely manner.
   - Obtain clinical samples when appropriate in a timely manner.
   - Obtain case histories.
   - Immediately investigate reports of suspect sick food workers and exclude if necessary. Request all symptomatic food workers to submit stool specimens within 48 hours. Food workers who do not submit stool specimens must be restricted from work until they comply.
5) Conduct an environmental investigation within 24 hours. Conduct a Hazard Analysis Critical Control Point (HACCP) risk assessment of the implicated foods as part of your investigation.
6) Develop a case definition and identify cases. Make epidemiological associations (TIME, PLACE, PERSON). Formulate hypotheses.
7) Take control action. If necessary, initiate immediate correction or enforcement actions (embargo, disposal, emergency closures, suspension of operations. If necessary, issue a press release or public notice.
8) Complete and submit *case report forms* (on confirmed reportable illnesses) to the Massachusetts Department of Public Health. Call the Surveillance Program at (617) 983-6816 for more information.
9) Document all your actions.

NOTE:

The information on this page is abbreviated. For more complete and detailed information, consult the Massachusetts Department of Public Health's *Foodborne Illness Investigation and Control Reference Manual.* See article on page 1.

Important telephone numbers

When investigating foodborne illness, technical support from the state is available from the following divisions.

- **Division of Epidemiology and Immunization.** Contact for epidemiological support at (617) 983-6800.
- **Division of Food and Drugs.** Contact for environmental support at (617) 983-6712.
- **Division of Diagnostic Laboratories.** Contact for laboratory support at (617) 983-6600.

Immunization

What's ahead for school entry immunization requirement

Since 1994, several new vaccines have been licensed, and new recommendations for optimal immunization of children have been published by both the American Academy of Pediatrics (AAP) and the Advisory Committee on Immunization Practices (ACIP). The Department of Public Health, in consultation with colleagues in the school health, public health and provider communities, is exploring several revisions to the current immunization requirements. For entry into Kindergarten through 12th grade, four changes are being discussed, including: requiring 4 doses of polio vaccine, one or two doses of varicella vaccine for all susceptible students, 3 doses of hepatitis B, and 1 dose of Td vaccine. For college entry, two changes are proposed: 3 doses of hepatitis B vaccine, and an expansion of the scope of students for whom the regulations would apply. If these **proposed changes** are approved, they might be expected to become effective in the fall of 1999 or 2000. If you have questions or would like to comment on these proposed changes, please contact the Massachusetts Immunization Program at (617) 983-6800.

Ordering pediatric hepatitis A vaccine

Hepatitis A vaccine is now available through the Massachusetts Immunization Program (MIP) for high-risk children 2 through 18 years of age. While this vaccine will ***not*** be a stock item at your local vaccine distributor, you will be able to obtain it through them. You must order hepatitis A vaccine directly from the MIP. The vaccine will be packaged for you and given to your local vaccine distributor. Contact them to arrange a convenient time to pick up the vaccine.

Hepatitis A orders can be placed by fax or mail using the special *Hepatitis A Pediatric Vaccine Order Form*. Vaccine usage will be accounted for on the special *Hepatitis A Pediatric Vaccine Usage Report*. This form should be used instead of the scanner form to document vaccine administration. This form is to be mailed or faxed back to the MIP immediately following vaccine administration.

A mailing containing guidelines on hepatitis A ordering and accountability, including the above mentioned order form, usage report, and a list of eligible high-risk groups, was mailed to all vaccine providers. If you did not receive this packet, please call your regional MIP office or our central office at (617) 983-6800.

Expanded vaccine availability

continued from page 1

Providers are encouraged to contact their local vaccine distributor to order adequate supplies of vaccine. The MIP is encouraging providers to try to catch-up adolescents with varicella and hepatitis B vaccine within the next two years. It is possible that sufficient funding for all these adolescent age groups may not be available after this time period. If you have any questions concerning the new policy change, please call your regional MIP office or our central office at (617) 983-6800.

Summary Table Of Expanded Vaccine Availability

State Supplied Vaccine	New Eligible Groups
Hepatitis B	■ **all children through 18 years of age;** ■ targeted catch-up of adolescents in the 6th through 12th grades and all children in any of the high-risk groups.
Varicella	■ **susceptible children through 18 years of age** ■ susceptible household contacts of immunocompromised individuals regardless of age
MMR	■ **all children through 18 years of age** requiring a first or second dose
Hepatitis A	■ **high risk children through 18 years of age,** with prior approval from the MIP

Community-based TB prevention

Despite the existence of effective preventive therapy for tuberculosis, treatment of persons with TB infection is hindered by multiple barriers: access to primary health care, cultural and social considerations, negative attitudes associated with TB, and long duration of treatment. In 1996, the city of Boston TB Control Program developed a Community-Based TB Prevention Initiative aimed at delivering TB preventive services in neighborhood health centers where many high-risk populations receive medical care (see Figure 1).

The initiative is based on the belief that increased accessibility leads to improved acceptability of TB prevention within the community, which can increase adherence to and safe completion of preventive therapy. Health centers are culturally and ethnically linked to their communities. Location and hours of operation improve access, and there is an ongoing relationship between the patient/family and the primary care provider. However, health center resources are limited, and primary care providers historically have not been well informed about TB prevention and treatment; nor have they been linked to the public health infrastructure in an ongoing way. The Community-Based TB Prevention Program, divided into three components, was designed to accommodate these issues.

The **Program Initiation Phase** includes:
a. assessment of health center resources,
b. identification of core provider teams, and
c. education of health center staff.

The **Referral and Evaluation Phase**, which is ongoing, includes:
a. TB screening–infected clients are identified and referred to Boston Medical Center (BMC) TB Clinic for initial evaluation,
b. initiation of preventive therapy, and
c. communication of findings and clinical recommendations to referring health center.

The **Monthly Monitoring Phase**, also ongoing, has two distinct activities:
a. client-focused monitoring, which includes monthly client follow-up visit at the referring health center, and documentation of monthly visit using the *TB Control Program Preventive Therapy Follow-up Form*, and
b. program-focused monitoring, which includes monthly review of health center documentation by TB Control Program staff.

Metro Boston regional update

Tuberculosis Surveillance Area (TSA) 2

The Metro Boston Region includes suburban Boston west to Framingham, north to Wakefield, and south through Norfolk County.

Epidemiology: In 1996, there were 49 verified cases of tuberculosis in TSA 2 (approximately 19% of the state's 262 cases). Although the cases in Massachusetts documented a 20% decrease statewide from 1995, this decrease was not seen in TSA 2.

Clinical Services: Clinical services are currently provided free at Cambridge Hospital, St. Elizabeth's Hospital, and Metro West Medical Center, Framingham Campus. The clinic located at the Brighton Marine Health Center has moved back to the main building of St. Elizabeth's Hospital. We welcome a new TB clinic at Lahey Hitchcock Medical Center in Burlington. This new clinic provides services to those communities previously served by Middlesex County Hospital in Waltham.

Community Outreach Activities: Kenedy Montesir, who speaks fluent Haitian-Creole and Spanish, provides community outreach services.

Support services are provided by Jo-Ann Keegan, RN, MSN (TSA Nurse) who can be reached at (617) 727-7908 ext. 48 or (508) 851-7261 ext. 48, Mary Mahoney (Clerk), and Linda Thistle (Case Register Surveyor).

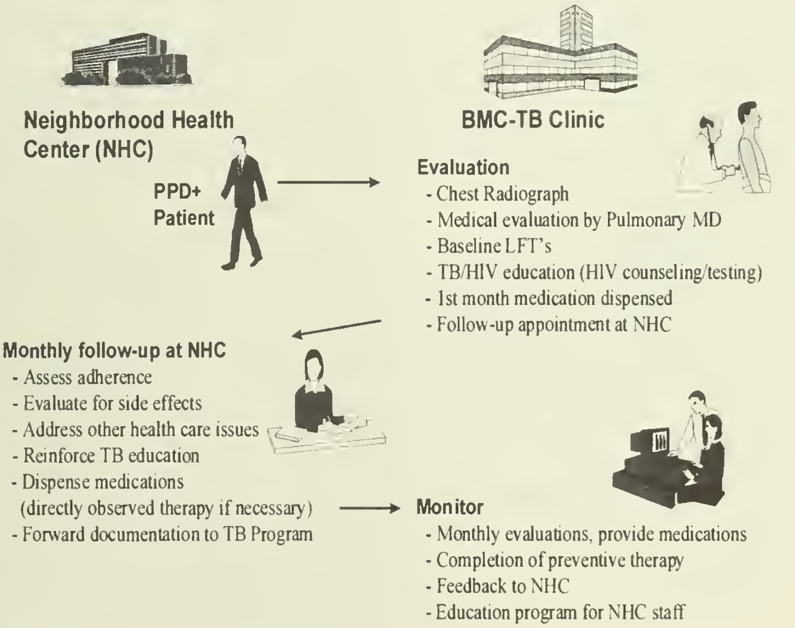
Neighborhood Health Center (NHC)
BMC-TB Clinic
PPD+ Patient
Evaluation
- Chest Radiograph
- Medical evaluation by Pulmonary MD
- Baseline LFT's
- TB/HIV education (HIV counseling/testing)
- 1st month medication dispensed
- Follow-up appointment at NHC
Monthly follow-up at NHC
- Assess adherence
- Evaluate for side effects
- Address other health care issues
- Reinforce TB education
- Dispense medications (directly observed therapy if necessary)
- Forward documentation to TB Program
Monitor
- Monthly evaluations, provide medications
- Completion of preventive therapy
- Feedback to NHC
- Education program for NHC staff

Figure 1
Community-Based TB Prevention

CD UPDATE
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Boston, MA 02130

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New toll free number

You can now call the Massachusetts Department of Public Health, Division of Epidemiology and Immunization toll free at **1-888-658-2850**, Monday through Friday 9 AM to 5 PM.

Communicable Disease UPDATE
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Howard K. Koh, MD, MPH, Commissioner

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Save the dates

Ted Badger Conference

TB Tomorrow: Diagnosis, Treatment and Prevention
March 24, 1998, 8 AM -4 PM. To be held at the Crown Plaza in Natick. For information call Denise Lancto at (617) 983-6970.

CDC Satellite Training Courses

Vaccine Safety and Risk Communication
February 26, 1998, two broadcasts at 8-10 AM *and* 12-2 PM. To be held at the State Laboratory Institute in Jamaica Plain. Accessible by MBTA, parking only in Fitz-In Lot at 3649 Washington St. For registration information call Jean Franzini at (617) 983-6800.

The Epidemiology and Prevention of Vaccine-Preventable Diseases
April 9, 16, 23, 30, 1998 (4-day course)

Adult Vaccine-Preventable Diseases
June 4, 1998

These programs will be carried live by the Health and Sciences Television Network (HTSN) and by the Long Term Care Network (LTCN). For more information to downlink your site or attend a program, please call Jean Franzini at (617) 983-6800.

3rd Annual Massachusetts Immunization Action Partnership (MIAP) Conference

May 28, 1998. The keynote speaker is William Atkinson, MD, MPH of the National Immunization Program, Centers for Disease Control and Prevention (CDC), Atlanta, Georgia.

Massachusetts Public Health Association – Annual Women's Breakfast Series

Sponsored by the Women's Health Section of the Massachusetts Public Health Association (MPHA), this series of inexpensive informational sessions are open to the public and located in downtown Boston. This year's theme is entitled, "Women's Health: Helping Women Help Themselves."

Complementary Therapies
February 1998

Women, Health and the Internet
March 1998

Women and Managed Care
April 1998

Surviving Cancer
May 1998

For more information, contact the MPHA at (617) 524-6696.

MASS. HS 30.1703: 6/2

Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 6, No. 2 Spring 1998

Herpes strikes 1 in 5

One in five Americans has genital herpes infection, and the number of people living with this incurable sexually transmitted disease has increased 30% since the late 1970s, according to the Centers for Disease Control and Prevention (CDC)

The findings were reported in the October 16, 1997 *New England Journal of Medicine*. The CDC estimates that nearly 22% of the population overall (45 million Americans), and almost 45% of African-Americans are infected with herpes simplex virus type 2 (HSV-2). The study also found that HSV-2 is more common among women (approximately one out of four women) than men (almost one out of five). This may be related to the higher efficiency of transmission from men to women. Since the last national survey of HSV-2 prevalence (conducted between 1976 and 1980), prevalence has increased most dramatically among young white teens. HSV-2 prevalence among 12 to 19-year-old whites is now five times higher than it was in the late 1970s; young people aged 20-29 years are now twice as likely to have HSV-2.

HSV-2 is usually transmitted sexually and causes recurrent painful ulcers in adults and severe infections in infants. Herpes can also be severe in people with suppressed immune systems. Symptoms of herpes can be treated, but the disease cannot be cured. With or without visible symptoms, the disease can be transmitted between sex partners. Herpes may play a major role in the heterosexual spread of HIV in this country. Herpes can make people more susceptible to HIV infection and make HIV-infected individuals more infectious. Preventing herpes can help control both epidemics.

Herpes is believed to be most infectious when sores and blisters are present. It is best to abstain from sex or direct contact when these symptoms are present. Between symptom outbreaks or with a partner whose herpes status is unknown, the consistent and correct

continued on page 3

Meningococcal vaccination policy

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Meningococcal vaccine is not recommended for routine use due to its ineffectiveness in children under 2 years of age, its relatively short duration of protection, and its failure to eliminate carriage of the bacteria which cause the illness. The vaccine also does not provide protection against all strains of the bacteria that cause illness. *Large-scale use of meningococcal vaccine is only recommended for controlling outbreaks when they occur, only in communities in which they occur, and not on a universal basis (MMWR 1997:46 No. RR-5)* See page 2 for definition of an outbreak.

Effective February 23, 1998, the Rhode Island Department of Health (RIDOH) announced a change in policy for the use of meningococcal vaccine. The new policy ***does not*** follow the Advisory Committee on Immunization Practices (ACIP) and the Centers for Disease Control and Prevention (CDC) recommendations (see page 2). The RIDOH recommends that residents age 2 through 22 years receive meningococcal vaccine. **The Massachusetts Department of Public Health (MDPH) continues to follow the ACIP and CDC recommendations and therefore *is not recommending or providing meningococcal vaccine*** for residents of Massachusetts.

Surveillance for meningococcal illness is ongoing in Massachusetts, with a high priority placed on identifying potential outbreaks. No outbreaks of disease have been identified in Massachusetts, and the number of reported cases remains stable (50-100 per year). Thus far, this year there have been fewer reported cases than last year and no clusters of cases. As recommended by the ACIP, each case is followed up with prompt identification and chemoprophylaxis of close contacts. Meningococcal disease is treatable and curable with antibiotics and, treated early, most patients recover fully.

Questions regarding the MDPH meningococcal vaccination policy may be directed to the Epidemiology Program at (617) 983-6800.

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Rabies reminder

April was Rabies Awareness Month. The Massachusetts Department of Public Health wants to remind people across Massachusetts that rabies is still very much a problem in nearly all cities and towns. Recently, a rabid puppy exposed over 60 children and adults, costing nearly $100,000 in post-exposure prophylaxis. Incidents like this can be avoided through proper pet vaccination and a strict adherence to pet quarantine regulations. Boards of health and others are encouraged to sponsor educational and awareness activities on a local level.

A related rabies update: please note that the Massachusetts Division of Fisheries and Wildlife is responsible for all **ferret** quarantines. After a bite, scratch, or other mucous membrane exposure of a human or animal, ferrets must be quarantined for ten days. The Division of Fisheries and Wildlife can be reached at (617) 727-3151, x 327.

Meningococcal vaccination policy

continued from page 1

The ACIP and CDC recommend the use of meningococcal vaccine for:

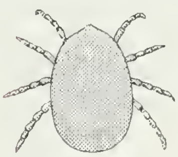
1. travelers to countries with endemic meningococcal disease, and
2. individuals with certain medical conditions that place them at high risk.
3. Vaccination may also be indicated if an institution- or community-based outbreak of meningococcal disease is identified.

How is an "outbreak" of meningococcal disease defined? A community- or organization-based "outbreak" of meningococcal disease is defined as the occurrence of three or more cases of confirmed or probable meningococcal disease due to a common serogroup of *Neisseria meningitidis* during a period of three months or less among persons residing in the same area, or with a common affiliation, with a primary attack rate of at least 10 cases per 100,000 population.

You may access the ACIP recommendations through the CDC web site at: <http://www.cdc.gov/epo/mmwr/preview/ind97_rr.html>. Select the *MMWR* volume for February 14, 1997 (Vol.46/No. RR-5).

Lyme Disease advisory committee

As Lyme disease cases continue to increase in Massachusetts, the need for public education, improved surveillance, and effective policy becomes greater. To help the Massachusetts Department of Public Health (MDPH) improve its efforts in preventing Lyme disease, the MDPH is announcing the formation of a statewide Lyme Disease Advisory Committee. The purpose of the committee will be to advise MDPH on matters related to Lyme disease, including policy, surveillance, and education. Members of this committee will be selected from nominees by the MDPH. Members will serve for a period of two years. Nominations are encouraged from the following categories: citizens' groups, government service, legislators, health providers' associations, health officers' groups, and technical and academic fields. Although attendance at quarterly Committee meetings will be open to all, to ensure the most diverse representation, membership on the Committee will be limited to one official individual (officer, board member, etc.) per agency, group, association, or institution represented.



To obtain a membership nomination form, call (617) 983-6800. Mail the completed nomination form to Alfred DeMaria, Jr., M.D., State Epidemiologist, Assistant Commissioner, Bureau of Communicable Disease Control, Massachusetts Department of Public Health, 305 South Street, Jamaica Plain, MA 02130; or fax the completed form to Dr. DeMaria at (617) 983-6925. Although nomination forms should be submitted by May 1 for the formation of the initial committee, nominations will be accepted at any time.

New needlestick hotline

A new national hotline (staffed by physicians) was created in November 1997 to help counsel clinicians in treating health care workers with job-related exposure to blood-borne diseases and infections. By calling **(888) 448-4911** from anywhere in the U.S., 24 hours a day, clinicians can gain access to the National Clinicians' Post-Exposure Prophylaxis Hotline, also called the PEPline.

1997 highlights

Last year was a year of accomplishment and challenge for the Division of STD Prevention (DSTDP). Compared to 1996, there was a 29% decline in infectious syphilis (from 262 to 187 cases); a 4% decline in gonorrhea (from 2,163 to 2,077 cases); and an increase of 8% in chlamydia (from 6,791 to 7,330). The increase in chlamydia is attributed to the first full year of using the more sensitive ligase chain reaction (LCR) test, and broader screening activities.

The Division also established new contracts for prevention services, thereby increasing the availability and accessibility of high-quality STD care and knowledge. These prevention services are provided through certain clinics that feature community outreach, as well as an expansion of satellite services with other providers. Thus, the goals of expanding the network of services and education, and moving STD prevention services from the clinics to the communities, are beginning to be realized.

We also received three new grants. One expands capacity to conduct surveillance in jails. A second allows expanded screening services in jails. The third allows us to measure and improve the quality of surveillance within managed care organizations. As managed care becomes the dominant form of medical service coverage in the nation, this grant is particularly significant. It places the Division in the forefront of efforts of looking at how public health and managed care can work together. Finally, DSTDP remains in the forefront of clinician education service and research as it continues to be the home of the New England STD/HIV Prevention Training Center, one of ten regionally-based centers funded by the CDC, providing STD prevention education to clinicians and laboratorians throughout New England.

Herpes

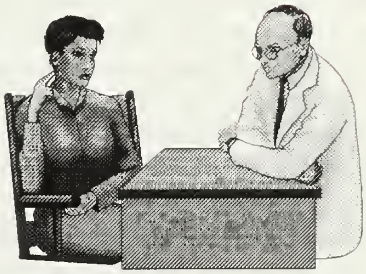
continued from page 1

use of latex condoms is the best protection. For people with frequent or severe outbreaks of herpes, antiviral medications may help to relieve or suppress outbreaks.

CDC is now working with other public health experts to develop a national plan which will specifically address the prevention of herpes. This will be part of a larger effort to begin to address the problems posed by viral STDs. The plan will address development of comprehensive national prevention guidelines, outline enhanced monitoring of levels of herpes infection, and propose new educational activities for health care professionals and the general public.

Who talks about STDs?

At current rates, at least one in four—and perhaps as many as one in two—Americans are expected to get a sexually transmitted disease or STD in their lifetime. According to a new survey by the Kaiser Family Foundation reported in *Glamour* magazine, many women may not be adequately screened for even the most common STDs. Only one out of eight women (12%) between the ages of 18-44 years reported that a health provider had raised the subject of STDs, other than HIV/AIDS, as part of their routine reproductive health care. Just 3% brought up STDs themselves. Most women (64%) said it is up to the health professional to initiate these conversations. While few of the women surveyed did talk about STDs at their first visit, 83% said, in general, STDs *should* be discussed when seeing a new health care provider for gynecological care.



Conversations about STDs were much less likely to be initiated by either provider or patient than other important health topics, such as breast self-exam, pap smears, and birth control. Many of the women who did not have a conversation about STDs during their gynecological or obstetrical visit reported that they were not asked, nor had they otherwise provided their health professional with other critical information that are part of assessment of patient's risk, such as whether they were currently sexually active, in a monogamous relationship, or using condoms regularly. Providers also failed to ask information about how many sexual partners their patients had in the last year, or questions about oral or anal sex. Despite this, 80% of these women who did not discuss STDs thought their health provider had enough information to assess the women's individual risks.

Last year, the Institute of Medicine released its report on STDs in America and called it the nation's "hidden epidemic." A major contributing cause is lack of adequate social/sexual history-taking during a medical office visit. Without such history-taking, assessment of a person's risk for an STD is left to assumption, bias, and other sources of information. Lack of an accurate assessment of risk eliminated the possibility of a preventive impact on risk behavior. The Division of STD Prevention is offering a half-day course to help clinicians improve their social/sexual history-taking skills. Call (617) 983-6940, or write to Paul Etkind, Director, Division of STD Prevention, for details.

Confidentially speaking

Miss H. is a 22-year-old woman born outside the United States. She has lived in Boston for one year and is a student. She regularly attends religious services and is active in her community. However, Miss H. is a very private and reserved woman, and when she was diagnosed with smear positive pulmonary tuberculosis, maintenance of confidentiality was of the utmost importance to her.

It is determined that Miss H. has been infectious for several weeks, and a contact investigation with TB screening/skin testing is planned by the local public health nurse. The screening will involve family members and household contacts, most of whom know Miss H's diagnosis. However, school, church, and work contacts also need to be screened, and this causes the patient much distress. The public health nurse and outreach educator both try to reassure the patient that only close contacts, people with whom the patient spent considerable time and who are identified by the client, will be contacted to arrange TB skin testing. Unfortunately, the public health staff learns that the school attended by the client has a policy that all classmates in every class be notified of their exposure to TB. Additionally, since the patient also participated in her church's day care program during services, and the church has a policy that parents be notified of any possibility of exposure to any communicable disease, a letter is being sent to parents of all enrolled children.

In a small, close-knit community, any descriptive information can identify a patient. Facts such as school, place of work, or religious affiliation, can be used to deduce identity. Additionally, TB is often associated with death, poverty, disgrace within the community, or within American society. Thus, the development of specific strategies designed to minimize the spread of information is essential.

Clearly, public health professionals have a responsibility to assure the health and safety of the community, and need to work with organizations and institutions, as well as other health professionals, to accomplish this goal. They also have a responsibility to protect the client's anonymity. Often there is real or potential conflict between the needs of the client and the institutional policy/procedure. Negotiating a resolution takes skill, patience, and a great deal of knowledge.

Public health staff must work quickly to control overreaction on the part of institutions/organizations. An intervention plan must include education of involved personnel and explanation of real (as opposed to perceived) risk of contagion. Above all, public health staff must continually reinforce the need to maintain the client's confidence. Sensitivity to the impact of disease in a specific culture or community is essential. Communication among involved parties, especially policy makers in organizations, must be maintained. Helping policy makers rethink institutional procedures that are not based in science is a prime role of the public health professional.

If a patient perceives that their confidence has been violated or threatened, the long term relationship between the client and health care professionals may be jeopardized, putting therapy completion at risk. The tension faced by public health staff as the needs and rights of the individual are balanced against the protection of the public's health is fairly constant. The consequences of failing to recognize this tension are significant. Knowledge, understanding, negotiation skills, and communication skills all are essential tools for the public health staff.

Communicable Disease Updates: 1996 vs. 1997 Reported Cases

DISEASE	1996	1997*	% change from 1996
AIDS	1,240	804	-35%
Botalism	0	0	–
Campylobacter	1,469	1,474	+.3%
Chlamydia	6,791	7,330	+8%
Cryptosporidiosis	83	58	-30%
E. coli O157:H7	162	99	-39%
Giardiasis	979	894	-9%
Gonorrhea	2,163	2,077	-4%
Hepatitis A	251	253	+.8%
Hepatitis B (acute)	113	72	-36%
Lyme Disease	378	364	-4%
Measles	12	16	+33%
Invasive Meningococcal Disease (Neisseria)	70	93	+33%
Pertussis	1,236	573	-54%
Rabies (animal)	115	282	+145%
Rubella	21	1	-95%
CRS**	0	0	
Salmonellosis	1,638	1,259	-23%
S. typhi (Typhoid)	18	19	+6%
Shigellosis	264	316	+20%
Syphilis (early)	262	187	-29%
TB	262	268	+2%

* Preliminary data. Reporting not yet complete.

** Congenital Rubella Syndrome

You be the epi

A Boston pediatrician contacts the Massachusetts Immunization Program (MIP) to consult on a febrile rash illness in a 14-month-old girl he recently vaccinated. He is concerned because she is an adoptee from China who arrived in the U.S. only 10 days ago. The physician first saw her one week earlier, when she presented with a runny nose, a fever of 101°F, and no additional symptoms. The physician saw her six days later and administered MMR, OPV, and DTaP-Hib. One day post-vaccination, she developed a rash on her face and an increasing fever. Two days post-vaccination, she developed a fever of 104°F, diarrhea, conjunctivitis, a runny nose, a dry cough, and the rash, that began on her face, had spread over her entire body.

The physician thinks she is infectious; his office is full of infants, small children, and some pregnant women. What do you tell the pediatrician to do, and what other steps should you take to investigate and control the spread of this illness?

Analysis

Onset of rash one day post-vaccination is unlikely to be due to the vaccination. The rash, high fever, conjunctivitis, and respiratory symptoms are highly suggestive of measles; rubella is also a possibility. Because the patient received MMR around the time of rash onset, serologic confirmation of measles or rubella will not be possible. Proceed on the presumption that this is a case of measles, which requires an immediate response.

Step 1

Collect from staff at the doctor's office information on demographics, symptoms, immunization history, and source of infection. Arrange for the pediatrician to collect a urine or nasopharyngeal specimen for viral isolation within five days of rash onset and to send it to the State Laboratory Institute.

Step 2

Implement control measures as outlined in the 1997 MIP measles control guidelines. Determine the infectious period of the patient. (The infectious period for measles is four days before through four days after rash onset, counting the day of onset as day zero.) Have the staff at the doctor's office:

a) identify all individuals exposed to the patient (including being in the same room up to two hours after she was present) during the two visits she made while infectious. of these, identify susceptibles, including high-risk ones (see MIP control guidelines for definitions);

b) immunize susceptibles with MMR, preferably within 72 hours of exposure, which can prevent measles in exposed people;

c) administer immune globulin (IG) intramuscularly to susceptibles with contraindications to measles vaccine, including infants, if within six days of exposure;

d) refer any exposed pregnant women to their health care provider.

Step 3

Notify the local board of health and relay all information collected so far. Call the girl's family and ask about the immune status and risk status of the household members. Have susceptible members vaccinated or be given IG, as appropriate. Ask about what other individuals or establishments may have been exposed during the girl's infectious period. Tell the parents to keep the girl at home without visitors for the rest of her infectious period. Confirm the travel dates of the girl and whether the likely site of infection was China

Step 4

Enlist the help of the local board of health in following up in similar fashion with the exposed individuals or establishments identified by the family.

Note: For more complete information, consult the 1997 *Red Book* and the MIP's 1997 Measles Control Guidelines. For copies of the MIP Disease Control Guidelines, call (617) 983-6800.

Influenza and pneumococcal vaccine for children

The Massachusetts Immunization Program (MIP) wants to remind pediatric providers that influenza and pneumococcal vaccines are available at no charge for all high risk children in the state. Please contact your vaccine distributor to order adequate supplies for your high risk patients.

Influenza vaccine, available in the early fall, must be ordered during the early summer. Please look for a mailing regarding flu vaccine orders for the 1998-99 influenza season in June, and be sure to place an order for flu vaccine for your high risk children before August 1. Pneumococcal vaccine for high risk patients is available year-round. If you are unsure of the "high risk" categories, or if you have any other questions, please call your regional MIP office or the Immunization Program at (617) 983-6800.

Immunization

Varicella Requirement

Varicella vaccine is currently recommended as part of the routine childhood immunization schedule by the Advisory Committee on Immunization Practices, the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP). Beginning on August 1, 1998, varicella vaccine will be required by the Office for Childcare Services for some children attending day care centers.

There is a place on our revised *Certificate of Immunization* for health care providers to document a reliable history of varicella disease. If you are using older certificates or "Blue Books," chicken pox history may be recorded in the space for varicella vaccine or other vaccines.

About 4 million cases of varicella occur every year in the United States. The Centers for Disease Control and Prevention (CDC) estimate that varicella infections result in up to 15,000 hospitalizations and over 100 deaths and 25-40 cases of congenital varicella syndrome per year. Other complications include pneumonia, acute cerebellar ataxia and serious skin infections. One of these serious skin infections, group A streptococcal infection (GAS), appears to be increasing as a complication.

Varicella has a high mortality rate (10-30%) in high risk children and adults. Vulnerable high risk individuals who cannot be immunized must rely on those around them to protect them from disease exposures through community-wide broad based coverage.

Varicella vaccine is safe, effective and widely used. Since being licensed in 1995, over 7 million doses have been distributed nationwide, with over 80,000 doses in Massachusetts. Recent studies in the United States show the vaccine is protective for up to 10 years, with studies in Japan showing protection for up to 20 years. The vaccine protects about 80% of recipients from acquiring any disease at all, and an additional 20% of recipients experience a very mild form of varicella, with few symptoms and less than 50 lesions.

In addition to preschool children, state-supplied varicella vaccine is now available for all children and adolescents through age 18 years.

New Day Care Immunization Requirement*

One dose of varicella vaccine, (or physician certified reliable history of chickenpox), will be *required* for all children attending day care who are 19 months of age or older and who were born on or after January 1, 1997.

*While not required, varicella vaccine is strongly *recommended* for susceptible preschool children.

Rubella outbreak hits northeast

An outbreak of rubella in adults has been reported in Connecticut and New York. The cases are occurring primarily among Latin American immigrants. As of February 24, 1998, 48 confirmed cases have been reported in connection with the outbreak. This is a significant number, given that only 238 and 161 cases were reported nationally in 1996 and 1997, respectively. In response, health officials in Connecticut and New York have begun immunization drives aimed at adults from Central and South America.

The current outbreak in Connecticut and New York is reminiscent of the 1993-1994 rubella outbreak in Massachusetts, in which 131 cases were reported, overwhelmingly in adults. More than one-third of the cases occurred in Latin Americans. Seven cases occurred in pregnant women, and one case of congenital rubella syndrome was identified, the first known case of CRS in the state since 1979 Almost half of the total cases involved institutions and hard-to-reach populations, such as the homeless, substance abusers, and those in correctional and other residential settings.

Studies have shown than many children and adults from other countries are susceptible to rubella. Many U.S.-born young adults also have never received rubella vaccine.

Given the very real potential for rubella to spread from Connecticut or New York to Massachusetts, and the continuing problem of underimmunization of adults. the Massachusetts Immunization Program (MIP) is making two precautionary recommendations:

1. Health care providers should be alert to all cases of febrile rash illness without other apparent cause and report them immediately to their local board of health and the MIP **(617-983-6800)**.

2. Health care providers, as well as directors of large institutions where either clients or staff are unlikely to be fully immunized, should arrange to get as many susceptible individuals as possible vaccinated with MMR. **Given the threat of another outbreak, the MIP will provide MMR without charge for this purpose.** If you would like to obtain MMR vaccine, please contact your local vaccine distributor or your regional immunization office.

Western and Central regional update

Tuberculosis Surveillance Area (TSA) 1

The Division of TB Prevention and Control has adopted new area boundaries. The Blackstone Valley communities are now part of TSA 1.

Epidemiology: In 1997 there were 36 cases (13.4%) verified for TSA 1. Analysis of the cases in TSA 1 by county indicate that 17 (47.2%) were from Worcester County, and 15 cases (41.7%) were from Hampden. The remaining 4 cases were from Berkshire, Hampshire, and Middlesex counties.

Clinical Services: Free clinic services are provided at Baystate Medical Center, Springfield; Berkshire Medical Center, Pittsfield; Health Alliance, Burbank Campus, Fitchburg; Franklin Medical Center, Greenfield: Harrington Memorial Hospital, Southbridge; Holyoke Hospital, Holyoke; Getchell/Ward Clinic, Family Health and Social Services, Worcester (in the former Worcester City Hospital).

Support Services are provided by Carol Cahill, RN (TSA Nurse), who can be reached at (413) 586-7525, or from the (413) area at (800) 445-1255, Evelyn Thomas (Administrative Assistant), and Kathleen Lupien (Case Register Surveyor). The TSA 1 office is located at the Department of Public Health's Western MA Regional Office in Northampton.

Community Outreach: Walezka (Wally) Rivera covers the Central Region, and Evelyn Rodriguez covers the Western Region. They are fluent in Spanish and English. Outreach staff can be reached at (413) 586-7525.

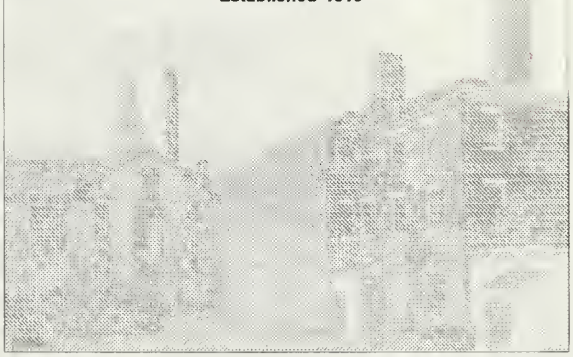
The corrections collaborative for TB prevention

Tuberculosis (TB) prevention in state and county correctional facilities is an important communicable disease control activity. In order to strengthen TB prevention activities, collaborations are ongoing between the Division of Tuberculosis Prevention and Control and state and county correctional facilities.

A series of correctional health care meetings were held to provide a mechanism of communication between the Division of TB Prevention and Control and correctional facilities, with goals of updating screening and treatment procedures, and improving adherence to TB preventive therapy. The County Health Care Administrators Group meets on a regular basis to review health care issues of concern in county correctional facilities. This group participated in the development of a comprehensive TB policy for use by long-term and short-term correctional facilities. They have also been instrumental in making recommendations for delivery of TB prevention services and for appropriate inmate educational materials. As a result, there have been several important advances toward better TB prevention in correctional facilities.

A TB curriculum has been developed which is linguistically and culturally appropriate to the inmate population. The curriculum consists of a bilingual (English and Spanish) flip chart with accompanying text, overheads and slides, and an easy-to-read pamphlet. Both provide information about TB transmission and pathogenesis, symptoms, risk factors and high risk groups, preventive and curative therapies, BCG, the TB/HIV connection, the importance of adherence to therapy, and instruction regarding the continuation of preventive therapy upon release.

Salem County Facility, Salem, MA
Established 1813



A County Collaborative: the County Inmate TB Preventive Therapy (CITPT) project is being piloted, in collaboration with two county correctional facilities, to improve adherence to preventive therapy among county inmates within the facility and upon release. The CITPT project will be housed at the Suffolk County House of Correction in Boston, an urban facility, and the Plymouth County Correctional Facility in Plymouth, a more rural facility. Inmates at participating facilities who are placed on TB preventive therapy, are referred to the Corrections Project. Upon release, consenting inmates who have yet to complete their course of preventive therapy, will be given a TB clinic appointment and will be assigned for follow-up by their local Board of Health and by a TB Outreach Worker.

For questions regarding TB prevention in Massachusetts correctional facilities, please call Marilyn DelValle, Corrections Coordinator, Division of Tuberculosis Prevention and Control, at (781) 828-7090.

CD UPDATE
State Laboratory Institute
305 South Street
Boston, MA 02130

Traveling?

International travel information is now available, toll-free, via the Centers for Disease Control and Prevention (CDC), 24 hours/day at **(888) 232-3228**. The information can be faxed and can also be found on the Internet at <http://www.cdc.gov/travel>. Travel questions can also be directed to the Logan International Health Clinic at **(617) 568-4878**.

Save the dates

Massachusetts Public Health Association Sponsored Events

Cancer Survivorship: A Journey to Healing
May 13 in Boston (part of the Women's Health Breakfast Series)

Public Health Nursing Conference
May 15 in Marlboro

Elder Care in a Changing World
May 19 in Holyoke

Contact MPHA at (617) 524-6696 for more information or registration.

CDC Satellite Training Course

Adult Vaccine Preventable Diseases
June 4, 1998. To be held at the State Laboratory Institute in Jamaica Plain. Accessible by MBTA. Parking only at Fitz-In Lot at 3649 Washington Street. This program will be carried live by the Health and Sciences Television Network (HTSN), which broadcasts to 1300 nationwide downlink sites, mostly in acute care hospitals and educational settings. It will also be carried live by the Long Term Care Network (LTCN). For more information to downlink your site or attend the program, please call Jean Franzini, RN from the Division of Epidemiology and Immunization at (617) 983-6850.

Third Annual Conference of the Massachusetts Immunization Action Partnership (MIAP)

May 28, 1998, 8:30 AM–4:30 PM. To be held at the Crowne Plaza Hotel in Worcester. Registration fee is $25. The keynote speaker is William Atkinson, MD, MPH, of the National Immunization Program, CDC, Atlanta, GA. CME/CMU credits have been applied for. For more information please contact Mimi Larzelere at MIAP, c/o The Medical Foundation, (617) 451-0049, ext. *870 or fax (617) 451-0062.

FDA Satellite Training Courses

Food Microbiological Control
August 11-13, 1998, 11:30 AM–4:00 PM (3-day course). To be held at the State Laboratory Institute in Jamaica Plain. For more information call Beth Altman from the Division of Food and Drugs at (617) 983-6769.

Foodborne Epidemiological Investigations
September 15-18, 1998, 11:30 AM–4:00 PM (4-day course). To be held at the State Laboratory Institute in Jamaica Plain. For more information call Allison Hackbarth, MPH from the Division of Epidemiology and Immunization at (617) 983-6800.

Both courses were developed as part of the National Food Safety Initiative.

Communicable Disease UPDATE
is a free quarterly publication of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health.
Howard K. Koh, MD, MPH, Commissioner

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 6, No. 3 Summer 1998

Flu season approaches

This is a good time of year to review immunization status of adults and their risk factors for disease. To help protect adults from infectious diseases, the Massachusetts Immunization Program (MIP) distributes influenza, pneumococcal, and tetanus-diphtheria (Td) vaccines for adults. These vaccines are also available for younger individuals who need them because of medical conditions or because they are household contacts of persons with risk factors.

The MIP recommends influenza vaccination for all individuals aged ≥65 years; residents of long-term care facilities; those with chronic heart and lung conditions, including asthma, and those with other chronic medical problems that place them at increased risk for the complications of influenza; those with weakened immune systems; children on long-term aspirin therapy; women who will be greater than 3 months pregnant during the flu season; and others. This year the MIP, in collaboration with the Massachusetts Diabetes Control Program of the Massachusetts Department of Public Health, Bureau of Family and Community Health, is targeting individuals with diabetes for influenza vaccination, because they are three times more likely to die with influenza and pneumonia. Many of the risk factors for severe outcome with influenza also predispose an individual towards developing complications from pneumococcal disease. Thus, these patients should also be assessed for pneumococcal vaccination.

The MIP generally recommends people to be vaccinated in October thru mid-November, however, people with high-risk conditions can be vaccinated by their health care provider beginning in September. Flu shots can also be given at any time during the influenza season, which extends into March. This flu season, the MIP will distribute 650,000 doses of flu vaccine to local boards of health. The influenza vaccine to be distributed this year will provide protection against A/Beijing-like (H1N1), A/Sydney-like (H3N2), and B/Beijing-like strains of influenza virus.

Public health education reaches the internet

Busy work schedules can make it difficult for public health professionals to get out of the office to attend courses and seminars that will keep them up to date with the latest information. However, thanks to the wizardry of the electronic age, opportunities to participate in continuing education activities are now only as far away as the computer on your desk. The World Wide Web (WWW) opens the door to unique opportunities for alternative learning. The following sites will launch you to new avenues for learning.

Shiga-toxin producing *E. coli*

The Massachusetts Department of Public Health's Epidemiology Program is pleased to announce the development of a new, interactive seminar on Shiga-toxin producing *E. coli*. The course is designed for anyone involved in the surveillance, diagnosis, treatment, or laboratory investigation of enteric diseases. Participation in the course provides two contact hours of continuing education (0.2 CEUs) for the participant. The course was developed by the Massachusetts Department of Public Health, the Northeast Association for Clinical Microbiology and Infectious Disease (NACMID), and the National Laboratory Training Network. The course fee is $20.00 for NACMID members and $25.00 for nonmembers. You may access the seminar at <http://www.shore.net/~nacmid/>.

Hepatitis C

Get the latest information on hepatitis C through the Centers for Disease Control and Prevention's (CDC) Hepatitis C Video Conference accessed through the WWW. A video of the course may be viewed through your computer using RealPlayer software (also available to download through the WWW). Continuing education credit is not available for this course, but the course and RealPlayer are available free of charge at: <http://www.tstradio.com/hepa.ram>.

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Epidemiology

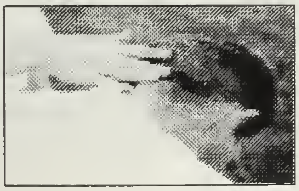
Tickborne coinfections

Infections with microorganisms transmitted by ticks constitute an emerging threat to public health. In Massachusetts, *Ixodes scapularis* ticks (deer ticks) are the vector of at least three microorganisms that may cause disease in humans. These diseases are: Lyme disease, caused by *Borrelia burgdorferi*; babesiosis, caused by *Babesia microti*; and human granulocytic ehrlichiosis, caused by a pathogen closely related to *Ehrlichia equi* and *Erlichia phagocytophilia*. Coinfection with two or more tick-borne pathogens may result in more severe disease. The appropriate clinical management of tick-borne diseases relies on the specific presentation of each case, as well as the patient's residence, travel history, and laboratory findings.

In Lyme disease endemic areas up to 10% of patients with Lyme disease are also infected with babesia. The initial symptoms of both illnesses may overlap. Nonspecific symptoms may include fever, fatigue, and flu-like symptoms. Most cases of babesiosis in immunocompetent individuals are subclinical and are a self-limiting illness. Severe disease, such as hemolytic anemia, most commonly occurs in asplenic or elderly patients. Since antibiotic therapy for Lyme disease is not effective against babesia, in a patient with Lyme disease and babesia coinfection, babesia may be responsible for the persistence of symptoms after antibiotic treatment.

Studies in Massachusetts have shown that a small proportion of persons with Lyme disease are infected with ehrlichia as well. Symptoms of ehrlichiosis may be nonspecific. Some of the antibiotics used for Lyme disease are also effective in the treatment of ehrlichiosis.

Therefore, in areas where all three diseases are endemic, symptoms as well as laboratory tests will play an important role in the confirmation and treatment of cases.



Preventive Measures

Taking appropriate preventive measures can decrease your chances of being bitten by a tick. To protect yourself from tick bites:

- **Wear light-colored clothes so ticks can be spotted more easily;**
- **Tuck pants into socks or boots, and shirt into pants;**
- **Use an appropriate insect repellent;**
- **Walk in the center of trails;**
- **Avoid tall grass and shrubbery; and**
- **Thoroughly check your body for ticks if you have been in a tick-infested area.**

Public health education reaches the internet

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Investigating an Outbreak: Pharyngitis in Louisiana
Follow the steps of an epidemiologic investigation of an outbreak of pharyngitis at: <http://www.cdc.gov/phtn/3050g.htm>.

Investigating a Rubella Outbreak
Learn about the current status of rubella and congenital rubella syndrome (CRS) in the U.S., how to investigate a suspected case of rubella, and an approach to the investigation and control of a rubella outbreak at: <http://cdlhc.sph.unc.edu/webcasts/archives/rubella/slideshow/index.html>.

Immunization Update
Obtain updates on new vaccines and vaccine combinations and recommendations from the Advisory Committee on Immunization Practices at: < http://cdlhc.sph.unc.edu/webcasts/archives/immune97/index.html>.

Other sites/information
Search for continuing medical education (CME) courses at: <http://www.searchcme.com/>.

Keep your eye on the CDC's Public Health Training Network site at: http://www.cdc.gov/phtn/media.htm (look under the "Interactive Multimedia" section)

Or, use a search engine and search under "Education" for "Continuing Education." Education is at your fingertips.

Survey shows need for more counseling

Clients of STD clinics often have complicated and competing needs for services beyond the medical care offered by the clinics. Although these services may be more psychosocial in nature, addressing such issues can have an impact on STD-related risk behaviors.

To explore these issues, the Massachusetts Division of STD Prevention has established a link with the Boston University School of Social Work in an effort to determine what psychosocial services are needed by clients, and what opportunities exist to address these needs. A graduate student from the school, Gina Baral, has spent six months conducting a needs assessment. Ms. Baral surveyed clinic nurses, the Disease Intervention Specialist supervisors, and clients themselves. This study was revealing in the degree of agreement among all three groups. The most important finding was the perceived need for additional and longer-term (3-5 visits) counseling.

Fifty-one patients were interviewed at six clinics, including Planned Parenthood in Worcester, SSTAR in New Bedford, Boston Medical Center, Brockton Hospital, Lowell Health Center, and Health Quarters in Lynn. Clients were interviewed as available and do not represent the total population of STD clinic users. The clients interviewed were 57% female, 58% were Caucasian, 25% African American, 18% Native American, 37% Latino, 20% Portuguese, 16% Cape Verdean and 5% Haitian (Respondents may have chosen more than one race or ethnicity category).

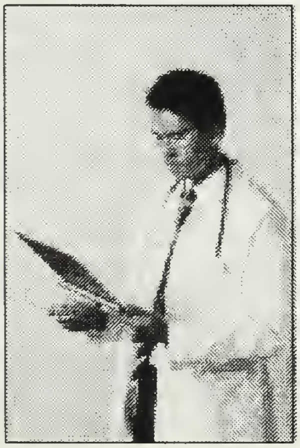
Clinic and field staff both felt that women had a need for counseling regarding self-esteem and health-seeking behaviors, and the majority of clients who expressed interest in counseling were women. Most had previously received counseling (63%) and felt that it was helpful (41%). A smaller number reported that previous counseling had been helpful specifically in changing their sexual and drug use behaviors (28%). Staff felt that they would like to provide additional service in these areas. Constraints on resources prevent this from happening. The other major areas of client needs identified by staff included access to health care, mental health and drug abuse-related services. Many STD clients are unable to access services because of financial constraints and lack of insurance coverage.

Clients stated that additional counseling could help address emotional needs, as well as help to develop skills to manage sexual health. Three-quarters expressed interest in longer-term (3-5 visits) and one-on-one counseling, preferably on site. However, only 63% indicated they would realistically keep an appointment or referral, if offered. Some (41%) expressed interest in group counseling, preferably on-site.

Clients expressing interest in counseling were asked what feelings people might have following an STD visit that might make them interested in this service. Feelings frequently mentioned included depression, shame, anger, fear, and guilt. Many clients, both male and female, used the word "dirty" to describe feelings.

An assessment of risk factors showed that 23% of all clients, and up to 31% of the women clients who expressed interest in counseling, reported being raped, forced, or intimidated to have sex. Close to half of these women (46%) indicated that this had occurred before the age of 10 years. In addition, 26% of all clients, and 31% of women clients who expressed interest in counseling, reported having had a partner who was violent. Of the clients surveyed, 8% had exchanged sex for drugs, and 14% for money. Ten percent reported injection drug use, and 26% had been in drug abuse treatment programs.

The most significant finding at this step of the project was the need for additional and longer-term counseling (3-5 visits). This is contrary to the historical practice of STD clinics, which offered episodic care and did not actively try to develop long-term provider/patient relationships. However, the importance of that relationship in fostering behavior change is being increasingly recognized, and a re-thinking of historical practices may be appropriate. Meanwhile, the STD Division will continue this survey with the next social work student to increase the response pool and the study's reliability.



Immunization in action

CHNAs boost MIIS

The Community Health Network Area (CHNA) Immunization Committees in Lawrence and New Bedford have worked with community groups, health care providers, local boards of health, and school departments to improve immunization rates and identify populations with low rates. These efforts will help facilitate the implementation of the Massachusetts Immunization Information System (MIIS) on a community-wide basis.

Lawrence CHNA 11

A CHNA-based community coalition is working to improve immunization rates in Lawrence. The campaign has involved: annual kindergarten retrospective studies of immunization rates; the computerization of the childhood immunization records at the local community health center; an outreach effort tied to the community data developed; and a locally-based effort to work with the Massachusetts Department of Public Health (MDPH) to bring the Massachusetts Immunization Information System (MIIS) to the community. The campaign was the result of a collaboration between the Boston University School of Public Health (BUSPH), the Merrimack College Urban Institute (MCURI) and the MDPH.

Student volunteers worked with officials from the Greater Lawrence Family Health Center (GLFHC) to computerize all the 2,000 immunization records of children under 2 years old in the clinic. These records were intended to serve as the basis of an outreach program directed by an intern from BUSPH involving bilingual/bicultural students from Merrimack College.

Under the leadership of Peg Burton, health coordinator for the Lawrence school system, the immunization data on the 9,000 students in the system's computerized health database is being converted for import into the MIIS. Similarly, data from the Pediatric Health Center at Holy Family Hospital in Methuen and their walk-in clinic in downtown Lawrence is being brought into the MIIS. MDPH staff have been meeting with data system personnel from the (GLFHC).

This effort has been a success, with several lessons learned. First, having an existing coalition as a base for the introduction of the MIIS has been enormously valuable, since the relevant individuals were already involved in the CHNA effort. Second, the study has drawn local attention to the issue. Third, the collaboration between the academic centers and the community has been the basis for both the studies and outreach. Finally, no effort as complex as a community immunization campaign can succeed without the active cooperation of local and state officials.

Greater New Bedford CHNA 26

The Greater New Bedford CHNA has focused on childhood immunization as a top priority since the CHNA's inception in 1993. The CHNA formed an Immunization Subcommittee, with representatives from Southcoast Medical Systems, local school systems, agencies that provide outreach services (such as WIC), the New Bedford Board of Health, Head Start, the Massachusetts Prevention Center, and the Kennedy Donovan Center.

Initial activities included focus groups in select communities and a 1993 retrospective study that included kindergarten children in the entire CHNA. This study found that only 64% had been fully immunized by 2 years old, and in some towns, the rate of compliance was as low as 55%. Committee goals included identifying perceptions about immunization by consumers and health care providers and eliminating barriers to immunization.

Surveys and focus groups found that:

- Parents wished to receive immunization information at physicians' offices rather than immunization clinics;
- Parents wanted to be notified by their providers about when their child's immunizations were due;
- There was a sense of apathy among parents who felt that diseases were controlled, and they did not understand the need for immunizations;
- There may have been some confusion among health care providers about the Recommended Immunization Schedule, and;
- Providers may have missed immunization opportunities during medical encounters.

As a result, the Immunization Committee implemented a plan of action. Over the past five years, they have provided immunization education to parents at ESL classes, at housing developments, and in teen parenting programs. They are also helping local pediatricians publicize the availability of free immunizations to all families who can not afford an

continued on page 5

CHNAs boost MIIS

continued from page 4

administration fee. They have developed and distributed a region-wide brochure listing all immunization sites, particularly sites that offer immunizations at no or low cost. Finally, they have organized computerized "call-back" systems for local pediatricians' offices.

With the support of MDPH, the CHNA initiated a follow-up retrospective study of kindergarten children in 1997. The study showed a 10% to 19% increase in immunization rates for children two years of age.

The latest initiative involves facilitating the implementation of the MIIS. Because they have worked for the past five years to build a regional coalition, the Greater New Bedford CHNA was a natural place for implementing a system that will strengthen connections. In collaboration with the MIIS staff, the CHNA has put together a team to implement the system. The levels of action include documenting registrations at birth through the Southcoast Health System (which operates three community hospitals in New Bedford, Fall River, and Wareham). They will also be tracking children immunized at the Greater New Bedford Community Health Center, the New Bedford School Department, and at several key pediatric practices in the Greater New Bedford area. Implementation is targeted for late summer or early fall of 1998.

After five years of advocating for childhood immunization, it has been shown that a broad-based coalition is key in reaching children and their families, and in reinforcing the immunization message.

Foodborne illness reference manual on-line

The Massachusetts *Foodborne Illness Investigation and Control Reference Manual* is now available on the Massachusetts Department of Public Health's web page. The reference manual is geared to local boards of health and is a comprehensive guide that offers instruction on foodborne illness surveillance, epidemiologic and environmental investigation, and control. The web page address is <http://www.magnet.state.ma.us/dph/>. Look under "What's New" and scroll down to May 29, 1998. You will need Adobe Acrobat software, available at <http://www.adobe.com>, to view and download information.

You be the epi

You are the local public health nurse and have been notified that a patient who has sputum smear-positive for AFB (acid-fast bacilli) was admitted to your local hospital. The presumptive diagnosis is tuberculosis (TB) disease. What do you do?

Analysis

1. Visit the patient prior to discharge. Obtain a history, clinical data and contact information. Educate the patient about TB treatment, prevention and follow-up. Contact the discharge planner so that you are included in developing the patient's discharge plan.

During a home visit prior to the patient's discharge you find a 40-year old wife and two-year old daughter living in the household. Neither have symptoms of TB disease. You do a PPD skin test on both and read the results in 48-72 hours. You find that the wife has 16 mm of induration, but the daughter has no induration. How would you evaluate their need for preventive therapy?

2. Since the wife is a close contact to someone with infectious TB, and she has a positive skin test (≥5 mm for close contacts), she needs further evaluation. This includes:

- A nursing assessment to determine prior PPD status, history of treatment for TB infection or disease, or medical conditions that are pertinent to TB treatment regimens;
- A chest x-ray to rule out active TB disease, and;
- If she has no history of prior appropriate treatment, a course of preventive therapy, regardless of age.

3. The daughter, also a close contact, has a 0 mm skin test reaction. Only a week has passed since she last spent time with her infectious father. Therefore, you cannot assume she is not infected with TB; she may not have converted her skin test yet. In addition, because she is so young, she may develop more serious forms of TB (miliary TB, meningitis) early after infection. What follow-up does she need?

- She also needs a medical evaluation with a chest x-ray;
- Start preventive therapy now, even with a negative PPD, and;
- Retest in 8 weeks. Discontinue her preventive therapy if her skin test is 0 mm. If she has a positive reaction, she should complete an entire course of preventive therapy (9 months for children).

Immunization

Hepatitis B–immunizing teens

With hepatitis B vaccine now available from the Massachusetts Department of Public Health (MDPH) for all children through age 18 years, more than 350 elementary, middle and high schools have instituted school-based hepatitis B immunization clinics. School-based hepatitis B vaccination programs are still the most effective method of reaching adolescents and of ensuring the completion of the immunization series. The Massachusetts Immunization Program (MIP) estimates that almost half of the children in the state have received the complete hepatitis B three-shot series, most of them through voluntary school-based programs. However, beginning September 1, 1999, Hepatitis B vaccination will be required for entry into 7th grade.

Immunizing all children against this contagious and dangerous disease is of public health importance. As children enter their adolescent years, many of the behaviors that put them at risk for acquiring the bloodborne hepatitis B virus become more common.

Successful implementation of school-based hepatitis B immunization clinics has relied on community partnerships. With the continued support of the Joint Committee on Adolescent Hepatitis B Immunization, whose membership includes boards of health, school nurses and physicians, superintendents of schools, members of the Massachusetts Chapter of the American Academy of Pediatricians (MCAAP), Rotary Clubs International, Massachusetts Parent-Teacher Organizations, and MIP Hepatitis B Prevention Project staff, all children through age 18 years can be free from the threat of hepatitis B infection.

Please contact the MIP at (617) 983-6800 with questions, and for guidance in starting school- and community-based hepatitis B immunization clinics in your area.

New varicella immunization requirement for child care centers*
Effective August 1, 1998

One dose of varicella vaccine, or a physician-certified reliable history of chickenpox, will be *required* for all children attending a child care center who were born on or after January 1, 1997 **and** who are 19 months of age or older.

*This requirement pertains to all child care centers, whether known by day care, preschool, or some other term, that are regulated by the Office for Child Care Services (formerly known as the Office for Children).

Please note: Effective September 1, 1999, varicella vaccine, or history of disease, will also be required for all children, of any age, attending child care centers run by public schools systems and regulated by the Massachusetts Department of Public Health.

Northeast regional update

Tuberculosis Surveillance Area (TSA) III

Epidemiology: In 1997, 42 cases of tuberculosis were identified in TSA III, compared to 41 cases in 1996.

Clinical Services are provided at Salem Hospital, Lawrence General Hospital, Saints Memorial Medical Center, and Malden Hospital. The North Shore Pulmonary Clinic located at the Salem Hospital serves patients from Salem, Lynn, and surrounding towns. MDPH TB quality improvement evaluations have been completed. A full quality review, including chart audits for each clinic site, will be conducted next year.

Support services are provided by Nancy Taylor Flynn, RN, BSN (TSA Nurse), who can be reached at (617) 727-7908 or (978) 851-7261, x50. Other staff are Constance Parke (Secretarial Services) and Linda Thistle (Case Register Surveyor).

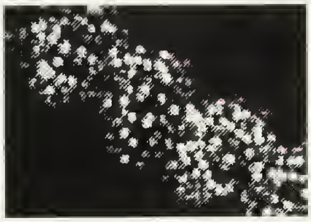
Community Outreach: Outreach workers (ORW) are assigned to "higher-risk" areas for tuberculosis. Higher-risk communities in the Northeast include: Lawrence, Lynn, Malden, and Lowell. Regional Refugee Health Coordinators are Emily Wen, located at the Greater Boston office, and Bich Ngoc Vu, located at the Northeast Regional Office. Outreach educators serve the Bosnian, Cuban, Haitian, Russian, Somali, and Iraqi communities. Refugee Health Outreach Educators for the Northeast are Sovannary Lak (Cambodian community), and Em Nguyen (Vietnamese Community). Outreach staff can be reached through Nancy Taylor Flynn, RN, TSA Nurse (phone number above).

Education: The TSA nurses have initiated a research project entitled "Completion of Therapy Survey." This will provide important information about the strategies, circumstances, and nursing interventions that affect patients who successfully complete tuberculosis treatment. The survey will be administered to patients when they complete therapy. The information collected will be used to improve the delivery of services to patients.

The **TB Community Prevention Project** is an effort to decrease population risk for tuberculosis. Community involvement and collaboration are integral components of the project. Team members meet regularly to identify high-risk communities and to develop plans to deliver preventive services to the high-risk populations. Nancy Taylor Flynn, RN, is the team leader for Team 1. The communities in Team 1 are Lowell, Lawrence, Springfield, Worcester, Lynn, Malden, and Chelsea.

Continued transmission of TB

Two laboratory methods used to distinguish strains of bacteria are phage typing and restriction fragment length polymorphism (RFLP) analysis. They are powerful tools that can provide information to help epidemiologists link cases of disease. The following illustrates the use of these techniques to link TB cases over a 13-year period.



In 1974, John Doe was treated for tuberculosis. His disease was resistant to two first line TB drugs: isoniazid and streptomycin (I/S). In 1983 he relapsed with disease. In 1984 and 1985, an outbreak of I/S resistant tuberculosis was observed in 24 residents of a homeless shelter in Boston (where John Doe had lived).

Phage typing was performed, and revealed that almost all of the I/S resistant cases at the shelter had the same phage type. Active case finding, dedicated nursing, and ultraviolet light to kill TB organisms were implemented in the shelter system.

Despite this, in 1996, the Division of TB Control continued to find I/S resistant disease among homeless TB patients, and suspected that the I/S resistant strain of 1995-96 was the same as that of 1984-85. Since 1995, RFLP (DNA fingerprinting) has been performed on I/S-resistant TB specimens from Massachusetts homeless patients. This test is more specific than phage typing. If two individuals' TB organisms have the same RFLP fingerprint, it is likely that they have the same strain of TB, and transmission could possibly have occurred between them. All I/S resistant homeless cases tested in 1995/96 had the same RFLP pattern.

Evidence suggested that the cases continuing into 1996 were all infected with the same strain, originating in 1983. Molecular fingerprinting was performed at the Centers for Disease Control and Prevention (CDC) on 10 isolates, four from 1988/89 and six from 1995/96. Eight had the same fingerprint . The CDC felt that the two non-matching types will prove to be identical upon reprocessing.

The fact that recent I/S resistant, shelter-related cases in persons new to the shelter system were connected by molecular fingerprinting, as well as epidemiologically, means that not only are old infections progressing to disease, but that despite active case finding, preventive therapy and treatment, transmission of the same strain continues to occur.

CD UPDATE
Bureau of Communicable Disease Control
State Laboratory Institute
305 South Street
Boston, MA 02130

Save the dates

USAMRIID/CDC Live Satellite Training Course:

Medical Response to Biological Warfare and Terrorism, September 22–24, 1998, 12:30 PM –4:30 PM (3-day course).

This live, interactive broadcast will inform and educate health care professionals about the medical response in the event of a biological attack.

The target audiences are military clinicians involved in patient care, public health practitioners involved in disease surveillance and prevention, civilian clinicians who would be called upon to respond to an attack, and others who are interested in learning more about this subject.

The course is free and will be held at the State Laboratory Institute in Jamaica Plain. Continuing education credits are being applied for.

For more information or registration, call Allison Hackbarth, MPH, Division of Epidemiology and Immunization at (617) 983-6800.

FDA Live Satellite Training Course:

Foodborne Epidemiological Investigations
NOTE: This course was originally scheduled for November 16–19, 1998, and has been *POSTPONED* until spring of 1999. Look for new dates in the next newsletter issue.

The goal of this course is to encourage broad implementation of detection mechanisms that will ensure reliable reporting and investigation of foodborne illnesses for rapidly establishing cause and implementing control measures to prevent additional cases. The target audience is federal, state, and local public health professionals who investigate foodborne illness.

The course is free and will be held at the State Laboratory Institute in Jamaica Plain and Holyoke Community College in Holyoke. For more information or registration at the Jamaica Plain site, call Allison Hackbarth, MPH, Division of Epidemiology and Immunization at (617) 983-6800. For the Holyoke site, call Gina McNeely, RS, of the Holyoke Board of Health at (413) 534-2186.

A certificate of contact hours will be offered This course was developed as part of the National Food Safety Initiative.

Communicable Disease UPDATE is a free quarterly publication of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health.
Howard K. Koh, MD, MPH, Commissioner

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Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 6, No. 4 Fall 1998

Meningococcal vaccine not recommended for routine college immunization

In September 1997, the American College Health Association issued a recommendation that colleges consider immunizing students against meningococcal disease. At this time, the Advisory Committee on Immunization Practices (ACIP) and the Centers for Disease Control and Prevention (CDC) do not recommend routine administration of meningococcal vaccine to college students. They recommend that vaccine be provided for a defined target population of students **only if** a school-based outbreak of meningococcal disease is identified.

The Massachusetts Department of Public Health (MDPH) follows the guidelines and recommendations of the ACIP and CDC, and the MDPH **is not recommending routine immunization of college students against meningococcal disease.** We will not be providing meningococcal vaccine for school-based pre-exposure vaccination programs.

The CDC has concluded that routine vaccination of college students for meningococcal disease is not a cost-effective method of preventing disease in this population. This conclusion reflects the limitations of the vaccine. The vaccine is effective against only four of nine serogroups of the bacterium known to cause invasive disease. The vaccine confers short-term immunity (1 to 4 years) and has an efficacy rate of about 90% in persons over five years of age. Finally, the vaccine does not eradicate nasopharyngeal carriage of the organism.

Chemoprophylaxis of close contacts of a case of invasive meningococcal disease is the recommended method for control and prevention of disease in non-outbreak situations. Close contacts of the case include household contacts as well as individuals who have exchanged saliva or respiratory secretions with the case. Primary prevention lies in education about basic hygiene, including not sharing foods, beverages, or cigarettes.

Over the next two years, the CDC and state health departments will conduct a special surveillance project to determine if US college students have a greater risk for acquiring invasive meningococcal disease. If subgroups of the student population are found to be at increased risk, then changes in the ACIP recommendations concerning routine vaccination with meningococcal vaccines may be considered.

New rotavirus vaccine

Rotaviruses are the leading cause of viral gastroenteritis in infants throughout the world. Annually in the United States, they are estimated to cause some 3 million cases of diarrheal illness, 500,000 physician visits, 50,000 hospitalizations, and 20-40 deaths. Almost all children are infected in the first two or three years of life. In the United States, infection is seasonal, peaking in the southwest in November, spreading north and east, and peaking in New England in April-May.

A vaccine to protect against rotavirus disease, Rotashield®, manufactured by Wyeth-Lederle, was licensed on August 31, 1998. It is an oral, tetravalent vaccine (i.e., it includes antigens of four serotypes) and consists of live attenuated, non-disease causing viruses. The vaccine is 70-95% effective in preventing severe rotavirus diarrhea.

Recommendations regarding the use of rotavirus vaccine are expected to be issued by the Advisory Committee on Immunization Practices (ACIP) in the next few months. The recommended schedule is three doses, at 2, 4, and 6 months of age, to be given simultaneously with other vaccines. The first dose should not be given after six months of age, with subsequent doses not given after the first birthday.

The Massachusetts Immunization Program anticipates distribution of rotavirus vaccine in the next few months, pending publication of the ACIP recommendations and establishment of a federal contract for vaccine purchase.

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Epidemiology

Lyme disease activities

The Massachusetts Department of Public Health (MDPH) has been conducting passive Lyme disease surveillance in the Commonwealth since 1985. This system involves a combination of physician reports to local boards of health and laboratory reports to MDPH, which follows up with health care providers. This passive surveillance system underestimates the actual number of cases of Lyme disease. Active surveillance in areas of high, moderate, and low endemicity is needed to better understand the occurrence of Lyme disease in Massachusetts.

Therefore, the MDPH has begun implementing a new Massachusetts Lyme Disease Surveillance System. The goal is to establish active surveillance of Lyme disease cases in eight areas. The eight areas include Ipswich, Framingham, the Quabbin Reservoir (Belchertown/Ware), Bourne, Rochester, Yarmouth, Martha's Vineyard, and Nantucket. Establishing this active, sentinel surveillance system involves recruiting, enrolling, and following up with local health departments, hospitals, and providers within the selected sentinel sites. Efforts to fully implement this system for the start of the 1999 Lyme disease season are on target.

In addition to conducting active surveillance in the eight targeted areas, the MDPH is also taking measures to improve reporting of Lyme disease cases elsewhere in the state. To accomplish this, we have designed a simplified case reporting form which allows physicians to list multiple cases of Lyme disease on a single report form. To facilitate reporting, the Lyme disease case report form can be sent directly to MDPH. We will then inform the local health department. If a case is initially reported to the local health department, they should use the new reporting form as well. You may request a copy of the new Lyme disease case report form by calling (617) 983-6800.

With Lyme disease vaccine soon to be available, the Advisory Committee on Immunization Practices is currently drafting recommendations for use. There are two vaccines currently awaiting approval; one is manufactured by SmithKline Beecham, and one by Pasteur Merieux Connaught. Both vaccines consist of recombinant *Borrelia burgdorferi* outer surface lipoprotein A (OspA). Immunization would require a series of three doses administered over the course of one year, as well as periodic boosters. Efficacy trials have been completed in two population study groups, aged 15 to 65 years and 19 to 92 years. In Lyme disease endemic areas, the SmithKline Beecham vaccine proved 76% effective at preventing Lyme infections after the third dose, and the Pasteur Merieux Connaught vaccine proved 92% effective at preventing Lyme infections after the third dose (New England Journal of Medicine; July 28, 1998). It is unknown at this time when the vaccines will be licensed.

Hepatitis C: the hidden epidemic

Almost 4 million Americans are believed to be infected with the hepatitis C virus (HCV). Due to aggressive blood, organ, and tissue donor screening, among other efforts, the incidence of acute cases of HCV is decreasing. However, the number of people developing chronic liver disease from past infection with HCV is rising. An estimated 8,000-10,000 deaths occur each year from HCV-associated chronic liver disease. No vaccine is available to prevent hepatitis C. Because of limited data, recommendations for prevention, treatment, and control are also limited.

To respond to this increasing public health problem, the Massachusetts Department of Public Health, Division of Epidemiology and Immunization, is expanding its efforts to raise public awareness of hepatitis C and to offer professional education, including dissemination of materials on identification, reporting, and counseling. Specific expanded activities will include developing guidelines for local health departments, as well as working with them to implement these guidelines. Surveillance systems will be expanded to improve reporting and completeness of reporting. More complete reporting can improve the ability of the Department to identify individuals and groups at risk for hepatitis C and assess the burden of infection. The ultimate goal of improved surveillance is to create focused and effective educational programs directed toward treatment, control, and prevention.

Holiday food safety handout

On page 4 you will find a ready-to-copy handout with holiday food safety tips. Feel free to copy it and distribute it in your town, within your agency or institution, or anywhere you think it might be helpful. Please let us know if this kind of insert is helpful to you.

STD: changing directions

In 1996, the Institute of Medicine (IOM) issued a landmark report about sexually transmitted diseases (STD) in America. Entitled "The Hidden Epidemic," the report provides stark details about the United States having the highest rates of STD among all of the industrialized nations, and the human and economic toll that these diseases exact. "The Hidden Epidemic" proceeds to point out that the United States has no systematic plan to deal with this health crisis, and then proposes such a plan.

There are four major strategies recommended by the IOM: 1) promotion of healthy sexual behavior; 2) development of leadership; 3) focus on adolescents and underserved populations; and 4) ensured access to services. There are numerous tactics suggested for each strategy. The result is a coherent plan for bringing this hidden epidemic to light and combating its impact.

The Centers for Disease Control and Prevention (CDC) has adopted the IOM plan and instituted it as the basis for funding programs. The Comprehensive STD Prevention Systems (CSPS) program grant announcement requires public health STD prevention programs to re-design their activities in line with the strategies and tactics suggested by the IOM. Thus, while retaining the historical core functions of clinical services, laboratory testing, surveillance, case investigation, and education, the Massachusetts Division of STD Prevention will strive to solicit community input and strengthen community partnerships. It will also reach out to higher-risk groups by forming or increasing partnerships with providers of HIV prevention, family planning, correctional care, adolescent health, and others.

The next few years will be an exciting and dynamic time. We expect to try new ways to promote healthy sexual behaviors on the individual, group, and community levels. This will involve experimenting with additional educational media in the clinics, using behavior change theory in designing counseling practices, and working with communities and service providers to try to change behavioral norms. We expect to work more intensively than in the past with professional, community, political, and religious leaders to enlist their cooperation into STD prevention activities. We will be reviewing all activities to ensure that services are always available to members of historically underserved groups. These include (but are not limited to) teens, the homeless, the poor, incarcerated populations, minorities, and women.

Finally, we will work to extend dedicated clinical services, try to ensure that STD screening and treatment guidelines are adopted by private sector providers, and ensure that providers of related services (e.g., HIV counseling, substance abuse treatment, etc.) are aware of and supportive of the need for referrals. We will continue to provide educational opportunities to clinicians and laboratorians, yet add more courses and conferences aimed at non-clinician partners and the public.

STD trends

Overall. Incidence rates of STDs continue a seven year downward trend, with some exceptions. Gonorrhea in 1997 (2,077 cases) is at the lowest number of reported cases since 1959. Chlamydia became a reportable disease in Massachusetts in late 1985. Reported cases in 1997 (7,330) are 28% below the 1989 peak level (10,131) of reported cases; however, the number of cases is 8% higher than in 1996 (6,791). Much of this increase is the result of increased chlamydia screening through the department's efforts working with Family Planning Clinics.

Syphilis. Overall rates of syphilis declined 64%, from 28 cases per 100,000 population in 1990, to 11 cases per 100,000 population in 1997. This is a small increase from the 1996 rate of 10 cases per 100,000 population. Of greater significance is the decline of lesion syphilis (primary and secondary), down 90% from 11.6 cases in 1990 to 1.2 cases per 100,000 population in 1997. The current rate is 76% below the *HEALTHY PEOPLE 2000* objective of 5 cases per 100,000.

Gonorrhea. Gonorrhea rates declined 71% from 125 in 1990 to 35 cases per 100,000 population in 1997. This is 65% below the *HEALTHY PEOPLE 2000* objective of 100 cases per 100,000.

Chlamydia. Chlamydia rates declined 45%, from 204 in 1990 to 122 cases per 100,000 population in 1997, which falls 13% below the *HEALTHY PEOPLE 2000* objective of 140 cases per 100,000.

In Massachusetts, the risk of acquiring a sexually transmitted infection is not equally distributed across all sexually active populations. Risk varies dramatically between individuals and groups depending on age, background, and socioeconomic status. The large number of at-risk individuals in socio-economically deprived communities, particularly adolescents, indicates that more needs to be done.

HOLIDAY FOOD SAFETY TIPS

Every year, over 30 million people in the United States will get sick from a foodborne illness--what most people call "food poisoning." This holiday season, help keep yourself and your family safe from foodborne illness by following these easy steps.

1. WASH YOUR HANDS!

This might sound obvious, but the truth is that anyone can carry germs (bacteria and viruses) on their hands. If you prepare food without washing your hands, some of those germs can get into the food and make people sick! Use plenty of soap and water to wash before you start cooking and after you handle any raw meat, poultry, or eggs. Don't forget that it's also important to wash your fruits and vegetables before eating them.

2. BE CAREFUL WITH THAT CUTTING BOARD!

Just like your hands, cutting boards and knives need to be thoroughly washed after touching any raw meat or poultry. Germs from raw foods like chicken can contaminate vegetables or other foods cut on the board after raw meat. Never use the same plate for both raw and cooked food. Plates, knives, forks, and utensils that touch raw meat or poultry need to be washed before being used with other foods.

3. COOK YOUR SEAFOOD AND MEATS!

Even if you're in a rush to serve your holiday dinner, don't be fooled into thinking a big turkey or roast is completely cooked without using a meat thermometer. All ground beef, including hamburgers, should be cooked to 160°F, and all poultry—whole birds with or without stuffing—should be cooked to 180°F. Juices that come out of meat should be clear. Remember to completely cook all seafood, like fish or clams. Keep in mind that a microwave can heat foods unevenly, so check all parts of the food to make sure they are cooked.

4. KEEP HOT FOODS HOT AND COLD FOODS COLD!

Always serve hot foods while they are hot. If you have leftovers, place them in small containers so they can cool off quickly, and put all leftovers into the refrigerator right away. Take the stuffing out of a turkey or roast first, and then cut the meat into pieces before refrigerating. Keep cold foods in the refrigerator until just before you are ready to use them.

FOR MORE INFORMATION AND FREE BROCHURES:

Massachusetts Department of Public Health (MDPH)
Division of Food and Drugs: (617) 983-6712
Division of Epidemiology and Immunization: (617) 983-6800

United States Department of Agriculture (USDA) Meat and Poultry Hotline:
1-800-535-4555

FDA's Food Information and Seafood Hotline: 1-800-332-4010

New hepatitis B vaccine formulation & distribution plan

As of August 27, 1998, the Merck Vaccine Division replaced their 2.5 mcg pediatric dose of hepatitis B vaccine with a 5.0 mcg pediatric/adolescent dose. The Massachusetts Immunization Program will distribute both the Recombivax HB® and Engerix-B® vaccine formulations, but the two types will be allocated by immunization region (outlined below). Have questions? Please call either Bob Morrison, Vaccine Manager, or Linda Keller, Hepatitis B Coordinator at (617) 983-6800.

Recommended Doses/Regions of Distribution for Currently Licensed Hepatitis B Vaccines*

RECOMBIVAX HB® (Merck & Co.)	
Immunization Regions:	Central, Southeast
Pediatric/Adolescent Formulation: (infant through 19 years)	5.0 mcg/0.5ml
Adult Formulation: (≥ 20 years)	10 mcg/1.0 ml
ENGERIX-B® (SmithKline Beecham)	
Immunization Regions:	Western, Metropolitan Boston, Northeast
Pediatric/ Adolescent Formulation: (infant through 19 years)	10 mcg/0.5ml
Adult Formulation: (≥ 20 years)	20 mcg/1.0ml

*Always Remember to Check the Package Insert!

You be the epi

Three weeks after a 37-year-old man returned from a trip to Asia, he presented to his physician's office with a history of low-grade fever, sore throat, general body aches, and other flu-like symptoms. Upon questioning, the man stated that he had experienced a penile discharge which had resolved by the time of the office visit, and that he had sexual relations while on his trip. Because of the history of the discharge, the physician suspected gonorrhea. He treated the man with ciprofloxacin and sent him home. The man returned one week later with continued sore throat and other non-specific symptoms. What should be the next steps?

Because of the continuing sore throat, the doctor asked more specific questions about the man's activities during travel. After further questioning, the patient stated that he'd had oral sex while on his trip. The doctor did a throat and a urethal culture, because quinolone-resistant gonorrhea is known to exist in Asia. The doctor also re-treated, but this time with ceftriaxone. Indeed, cultures grew *Neisseria gonorrhoeae*, but it was resistant to the quinolones (ciprofloxacin, norfloxacin, and ofloxacin). It was susceptible to penicillin and ceftriaxone. Symptoms resolved without incident, and there were no secondary cases among the patient's contacts since returning.

This incident is based upon a recent case that was investigated by the Division of STD Prevention. It demonstrates the need for specific history-taking, as well as the importance of laboratory cultures. New non-culture diagnostic technologies are fast, relatively easy, and extremely sensitive; however, they do not allow for antibiotic susceptibility testing.

Communicable Disease Updates
January – June 1997 vs. January – June 1998: Reported Cases

DISEASE	1997	1998*	% change from 1997
AIDS	458	505	+10%
Botulism	0	0	–
Campylobacter	726	570	-21%
Chlamydia	3,546	4,107	+16%
Cryptosporidiosis	24	37	+54%
E. coli O157:H7	30	61	+103%
Giardiasis	394	348	-12%
Gonorrhea	1,095	980	-11%
Invasive HI** (<5 yrs.)	3	7	+133%
Hepatitis A	155	47	-70%
Hepatitis B (acute)	37	32	-14%
Lyme Disease	94	242	+157%
Measles	8	2	-75%
Mumps	2	1	-50%
Invasive Meningococcal Disease (Neisseria)	60	28	-53%
Pertussis	289	325	+12%
Rabies (animal)	114	217	+90%
Rubella	1	8	+700%
CRS***	0	0	–
Salmonellosis	523	541	+3%
S. typhi (Typhoid)	11	9	-18%
Shigellosis	108	129	+19%
Syphilis (early)	102	78	-24%
TB	117	119	+2%

*Preliminary data. Reporting not yet complete.

**HI = Haemophilus Influenzae

***Congenital Rubella Syndrome

Immunization

New school regulations

The regulations governing the Immunization of Students Before Admission to School (105 CMR 220.00) have been amended to reflect the most recent recommendations of the American Academy of Pediatrics (AAP) and the Advisory Committee on Immunization Practices (ACIP).

Individuals and institutions affected by these new amendments include students attending certain preschools and all elementary schools, high schools, and institutions of higher education in the Commonwealth.

The new regulations clarify and expand several definitions and specify the student groups and institutions to which they apply (see Table 1).

In addition to the new and expanded definitions, there are new antigen-specific requirements for preschool, schools, and college entry. The regulations also standardize the age for the "catch-up" vaccination of adolescents at 7th grade entry. These requirements will be phased-in over a six year period to incorporate all grades and college years, as outlined in Table 2.

These requirements will help to optimally protect the children of Massachusetts against vaccine preventable diseases. Please review the Massachusetts Department of Public Health's 1998 *Immunization Guidelines* for further details regarding the immunization schedule and requirements for school entry or call the Massachusetts Immunization Program at (617) 983-6800.

Table 1 – New Definitions

Definition	Effective 9/1/1998	Effective 1/1/1999
Student	• All students attending certain preschools, schools, and post-secondary institutions; • Public or private setting; • Full or part-time foreign students on a student or other visa	---
Certificate of Immunization	• Form or letter signed by provider or designee; • Report from MIIS	---
Post-secondary Institution	---	• Any college, university, institute or school accredited by the New England Association of Schools and Colleges

Table 2 – New Requirements for School Entry

Required at Entry to...	New Requirements		Existing Requirements to Remain in Effect
	Effective 9/1/99	Effective 9/1/00	
Preschool	• 1 dose varicella[1]	---	• ≥ 4 doses DTaP/DTP • ≥ 3 doses polio[2] • 1 dose MMR • ≥ 3 doses Hib • 3 doses hepatitis B[3]
Kindergarten	• 1 dose varicella[1] • 4 doses polio[2] (if a mixed IPV/OPV schedule is used)	---	• 5 doses DTaP/DTP • 2 doses MMR[5] • 3 doses hepatitis B[3]
Grades 1-6	---	---	• ≥ 4 doses DTaP/DTP • ≥ 3 doses polio[2] • 2 doses MMR[5] (K-3) • 3 doses hepatitis B[3] (K-2)
Seventh Grade	• 3 doses hepatitis B[3] • 1 or 2 doses varicella[1] • 1 Td booster (if ≥ 5 years since the last dose)	---	• ≥ 4 doses DTaP/DTP • ≥ 3 doses polio[2] • 2 doses MMR[5]
College	---	• 3 doses hepatitis B[4]	• 1 Td booster within last 10 years • 2 doses MMR[5]

[1] Effective 8/1/98, 1 dose is required for attendance at centers licensed by the Office of Child Care Services for all children born on or after 1/1/97 and who are > 19 months of age, and who are without a physician-certified reliable history of chickenpox disease, which consists of 1) physician interpretation of parent/guardian description of chickenpox; 2) physician diagnosis of chickenpox; or 3) serologic proof of immunity.

[2] 4 doses are required, unless the third dose of an all OPV or all IPV series is given after the 4th birthday, in which case only 3 doses are required.

[3] Serologic proof of immunity is acceptable.

[4] Required for all full and part-time health science students. This will be phased-in incrementally and after 2005, will apply to freshmen – graduate students.

[5] 2 doses measles, 1 dose mumps, 1 dose rubella

TB community prevention project

The Division of TB Prevention and Control is strengthening secondary prevention efforts (early intervention measures to detect and treat TB infection) to better reach populations infected with TB. Historically, the TB Division has focused mainly on tertiary prevention (intervention measures to detect and treat TB disease), assuring completion of therapy for persons with active disease, in order to achieve primary prevention of reducing transmission of infection. However, at this time, 95% of the TB cases in Massachusetts complete an appropriate treatment regime.

The goal of the TB Community Prevention Project is to decrease the pool of people at risk from progressing to TB disease by identifying infected people, ensuring access to services, and providing appropriate follow-up care. Two teams were created to work with local community leaders, public health professionals, and private providers to create a shared commitment. Team members were drawn from all areas of the TB Division. Members of the Refugee and Immigrant Health Program volunteered to participate. Team 1, led by Nancy Taylor Flynn, will coordinate efforts with communities in the Northeastern and Western regions of Massachusetts. Team 2, led by Jo-Ann Keegan, will coordinate efforts with the high-risk communities in the Metro-Boston and Southeastern regions. Jennifer Alexander, a Public Health Prevention Specialist from the Centers for Disease Control and Prevention, will play an integral part in the design, implementation, management, and evaluation of the project. Community service coordinators Carmen Gorman and Judy Martinez will help facilitate the community intervention strategies.

Phase 1: The teams have begun community assessments to identify populations at risk for TB. The goal is to assist these communities in delivering services to populations at risk, such as newcomers.

Phase 2: Teams plan TB prevention strategies, educate the community, and build community consensus to support the prevention project.

Phase 3: In subsequent years, the teams will expand to include new communities until all high-risk populations in Massachusetts have access to effective preventive TB services. Evaluation and monitoring of the community prevention strategies will be ongoing.

Southeast regional clinical services highlight

Tuberculosis Surveillance Area (TSA 5)
TSA Nurse: Christine Jackson, RN

The Division of TB Prevention and Control funds 26 TB clinics throughout the state; these clinics provide TB services free of charge, and they are critical to TB prevention and control efforts in Massachusetts. TB clinic physicians and nurses are specialists in TB prevention and control. Interpreters and outreach workers ensure patients receive culturally and linguistically appropriate services. The Refugee and Immigrant Health Program provides outreach educators to assist the refugee and immigrant populations. We will highlight one of these clinics in each region in upcoming newsletters.

The New Bedford TB Clinic is one of seven TB clinics located in high-risk communities in the Southeastern region of Massachusetts (TSA 5). The TB Clinic is located at St. Luke's Hospital, which is the New Bedford member of the Southcoast Hospitals Group. The clinic is open on Tuesday afternoons, and generally 12–15 patients are seen per clinic. Dr. Daniel Martin is the new TB clinic physician. He replaces Dr. Channin, who retired after many years of dedicated and distinguished service. The New Bedford Health Department nurses, Mrs. Dorothy Richard, RN, and Mrs. Pat Cyr, RN, and clerical personnel staff the clinic. Mrs. Judy Hart is the supervisor, and Mrs. Fran Fuller is the clinic manager. Appointments are made through the New Bedford Health Department (508) 991-6284.

St. Luke's Hospital, New Bedford, MA

In 1997, there were 12 cases of tuberculosis in the greater New Bedford area, as compared to 5 cases in 1996. This increase was due in part to a cluster of cases. The diligent expertise of the clinic staff helped to identify the population at-risk through thorough contact investigation. Contact investigation is an essential means of identifying people who have TB infection or disease. Contacts were evaluated and treated at the TB clinic. After a year and a half, spread of TB appears to have ended.

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Don't forget. This newsletter is also available on our web page. The address is: [http://www.magnet.state.ma.us/dph/]. Click on "Publications/Statistics" and scroll down to *Communicable Disease Update*. The newsletters are in PDF format. You will need adobe acrobat software, available free at [http://www.adobe.com], to view and download information.

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Save the dates

CDC Live Satellite Training Courses:

Preparing for the Next Influenza Pandemic
February 25, 1999, two broadcasts at 9–11:30 AM and 1–3:30 PM

This live, interactive satellite broadcast will introduce guidelines to prepare for the next influenza pandemic and facilitate state and local emergency response preparations. The objectives for this course are to: 1) identify the rationale for influenza pandemic preparedness, 2) identify the guidelines for influenza pandemic preparedness, and 3) initiate influenza pandemic preparedness planning.

The target audience is state and local health officers; federal, state and local emergency preparedness planners; immunization program managers; physician and health care organizations; laboratory managers; pharmacists; hospital infection control practitioners; members of the media; and funeral director associations. This course i free and will be held at the State Laborato Institute in Jamaica Plain. CEUs will be offered. For more information or registration call Vicki Soler, RN, Division of Epidemiolog and Immunization at (617) 983-6800.

Epidemiology and Prevention of Vaccine Preventable Diseases
March 25, April 1, 8 and 15, 1999 (four–part series)

This course will be held at the State Labor tory Institute in Jamaica Plain. CEUs will b offered. For registration, call Victoria Soler, RN, Division of Epidemiology and Immunization at (617) 983-6800. More informatio about the course will be announced in the next issue of this newsletter.

TB Today:

Watch for the announcement of the TB Today course planned for April 12–15, 199 For more information call Denise Lancto a (617) 983-6970.

Foreign-language VIS available

Current Vaccine Information Statements (VIS) in 17 languages are available from the Massachusetts Immunization Program (MIP). A complete list will be published in the next issue of this newsletter. To obtain copies, contact your local regional immunization office or call the MIP at (617) 983-6800.